

Android

USER MANUAL



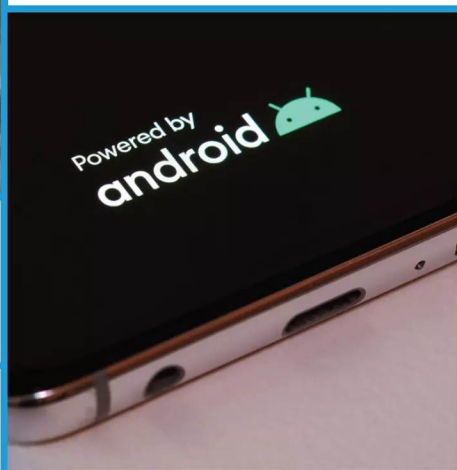
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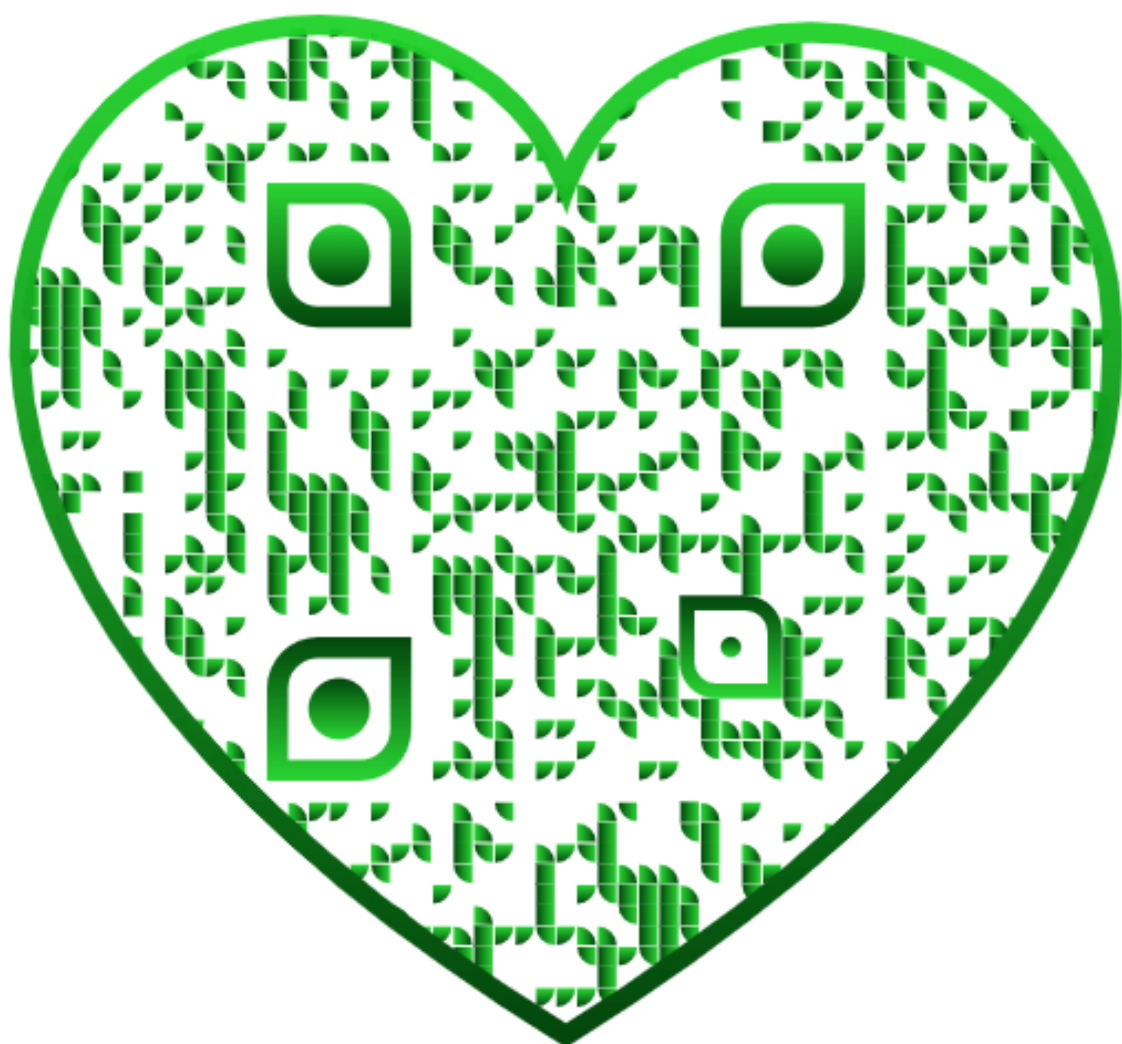


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USER MANUAL

Your Android phone or tablet is the perfect tool for checking your emails on the go, browsing the Internet while you wait for your train or listening to music while you exercise, but it is also capable of so much more. From playing the latest games and watching ondemand TV to managing your work/life balance and writing that long-planned novel.

This Android guidebook will take you from getting the most from the stock Android apps such as Gmail and Chrome, through solving common problems and on to learning about adding launchers and sideloading your device. We will show you how to explore the OS and get more from any Android phone or tablet, whether it is four years old or the latest cutting edge, flagship model.

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Contents

6 GETTING STARTED WITH ANDROID

- 8 Android Controls and Connections
- 12 Android Out-of-the-Box Setup
- 18 Add and Use a MicroSD Card
- 20 Making and Receiving Calls
- 24 Sending SMS Messages
- 26 Master the Android Keyboard
- 28 Customise Alerts and Ringtones
- 30 Personalising the Lock Screen
- 32 Personalising the Home Screen
- 36 How to Generate AI Wallpapers
- 38 Connecting to Your Wi-Fi
- 40 Setting Up and Sending Emails
- 44 Browse the Internet with Chrome
- 46 Getting the Most from Google Assistant
- 48 Managing Your Notifications
- 50 Locking the Home Screen
- 54 Back Up & Sync Your Android Device

56 Multi-Windows & Smart Capture

- 58 Always On & Display Widgets
- 60 Dark Mode, Blue Light & Brightness
- 62 Your Android Device's Camera
- 66 Editing Images in the Gallery App
- 68 Digital Wellbeing with Android
- 70 Transferring Files to your Device
- 71 Connecting Bluetooth Devices

72 APPS & SOFTWARE

- 74 Find and Install Apps and Games
- 78 Manage Your Installed Apps
- 80 Plan Events and Tasks with Calendar
- 82 Chatting with Google Meet
- 84 Using Google Wallet on Android
- 86 Navigate with Google Maps
- 88 Local Search & Map Layers



90 DOING MORE WITH ANDROID

- 92 Using Android Pay
- 94 Erase & Reset an Android Device
- 96 5 Things That Can Affect Phone Signal
- 98 Using the Developer Options
- 100 Speed Up Android Animations
- 102 Hidden Android Test Menus
- 104 Save Web Pages Offline
- 106 Dealing with Viruses on Android
- 108 Disable Android Bloatware
- 110 Sideloading Android APK
- 112 Smart Home on a Budget
- 114 10 Android Security Tips
- 116 Clean Up with Smart Manager
- 118 10 Common Problems Solved

122 ADDITIONAL DEVICES & HARDWARE

- 124 What is a Chromebook?

- 127 Personalising Chrome OS
- 130 The Chrome OS Desktop
- 132 Google Home First Time Setup
- 134 Listening to Music on Google Home
- 136 Playing Music Using Bluetooth
- 138 Google Home Routines



Getting Started with Android

An abstract, geometric artwork composed of various translucent, crystalline shapes in shades of blue, green, and purple. The shapes are layered and overlapping, creating a complex, three-dimensional effect. The background is a solid light blue.



Using our step-by-step guides, learn how to get started with your Android device, including sending emails, customising the Home screen and choosing widgets. Find out the best way to set up your device and the easiest way to get online. Discover how to customise the device and how to share images with friends.

Android Controls and Connections

Although the exact buttons and connection ports on your Android device may vary, there are standard features common to all models in the Android series of smartphones and tablets. Let's take a look at those buttons, connections and controls and see what they can do.

Connections

Whichever model of Android device you have, it has several ports and other such facilities to connect it to peripherals and also to charge and connect to a computer. It will also, of course, have a SIM card drawer to house the SIM card provided by your mobile service provider. Not every Galaxy model has every port described here.

USB-C/Micro USB

➤ Most modern devices, including recent Android device models, use USB-C connections for charging the phone or tablet and as a data cable, for connecting it to your computer. Older Android phones and tablets might use Micro USB instead. Either way, it's usually found at the bottom of your device.



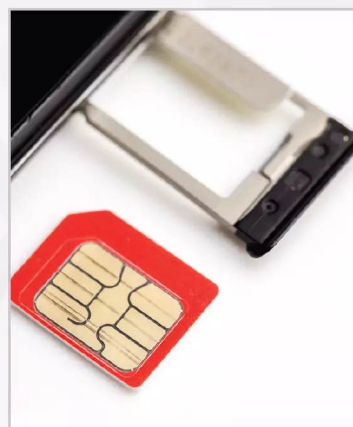
3.5mm Audio Port

➤ The most recent Android devices forego the headphone or 3.5mm port, as most users today use Bluetooth earbuds instead of cabled connections. If your phone or tablet is an older model, though, you use this port to plug in cabled headphones or earbuds, or to connect to a speaker set's AUX port with a 3.5mm-to-3.5mm cable.



SIM Card Tray

➤ To open your SIM card tray and put in the SIM, insert the thin pin-like tool supplied with the device or a straightened paperclip into the hole at the side of the closed tray. An older Android model might house the SIM next to the battery. If this is the case with yours, remove the battery cover to fit and remove the SIM.



Wireless Charging

➤ As well as charging your phone using a supplied USB cable, if it's Qi-compatible, you can charge it by placing it on a wireless charger instead. 'Qi' is pronounced 'key', and is a wireless charging standard. You will find that most current and previous generations of Android smartphones will enable this function.



On Your Android Phone

Different Android phones have buttons and features in different places, but as a general guide, here's where to find them on the Google Pixel 8 Pro. Your own phone might vary, but probably not by too much.

1 The Google Pixel 8 Pro has a triple-lens camera system, featuring a 50 MP main Camera, a 48MP Telephoto Camera and a 48 MP Ultra-Wide Camera.

2 This is the LED flash, for indoor and low-light photography.

3 The Pixel 8 Pro has a 6.7-inch screen, while the standard Pixel 8's screen is 6.2 inches. Other high-end Android phones can have even larger screens.

4 The front camera is an improved 10.5 MP device. Your selfies are optimised for social media feeds, and the camera captures more light than before, giving excellent low-light selfies with great colour and detail.

5 These are the volume-up and volume-down buttons. On most devices, pressing volume down along with the Power button or Home button will take a screenshot.

6 The Power button. Tap it to sleep and wake your phone, and hold it for the menu for shutting down and restarting.

7 The charging/data port is found at the foot of the phone here. A modern Galaxy phone can be charged wirelessly too.

8 The SIM tray is next to the charging/data port. The closed tray is a long oval shape, and it has a small hole in the left-hand side. Push the ejector tool or a straightened paperclip into this hole to eject the tray.

On Your Android Tablet

Just as with the smartphone controls, Android tablet controls and connections follow a fairly standard layout plan. This one's the Galaxy Tab Active4 Pro – the exact position of the buttons may vary slightly between devices.

1 Use this Side key to wake and sleep your tablet. Hold it to start a conversation with Bixby.

2 These are the Volume keys. As well as changing the volume, hold Volume-Down and press the Side key to take a screenshot.

3 The Active key. Press or press and hold to launch preset apps.

4 The front-facing selfie camera is 8MP, f/2.0 and can capture 1080p video at 30fps.

5 The tablet's stylus is slotted into a space on the left-hand side of the device.

6 The tablet's built-in microphones are found at the top and on the right-hand side of the device.

7 This is the USB-C port. Use it to charge your Android tablet, or to connect it to your computer for both charging and data transfer.

8 You can use Bluetooth earbuds with your tablet, but if you prefer old-school cabled headphones, plug them in here. You can also connect to a speaker's AUX port using a 3.5mm-to-3.5mm cable.

9 The device's stereo speakers are found on its left side (behind the stylus caddy) and the right side of the tablet.

10 The Recents button. Press it to be shown a list of apps you've recently used.



11 The Home key takes you back to the Home screen, where you can see the app icons. It contains a fingerprint sensor so you can unlock your tablet with your fingerprint.

12 The Back key. Press it to return to the previous screen on your tablet.

13 This is the keyboard dock port, which you can use to connect a compatible keyboard to your Android tablet.

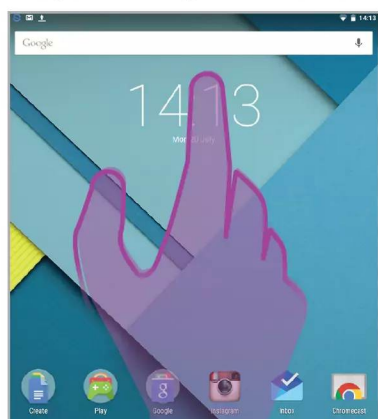
14 The NFC (Near Field Communication) antenna is found inside the tablet here. Use it for contactless payments.

15 The Galaxy Tab Active4 Pro's rear-facing camera is 13 MP, f/1.9, with HDR, panorama and 4K and 1080p video at 30fps. On its right is an AF LED flash. It can't match the Galaxy phones' cameras for power, but it's still very capable nonetheless.



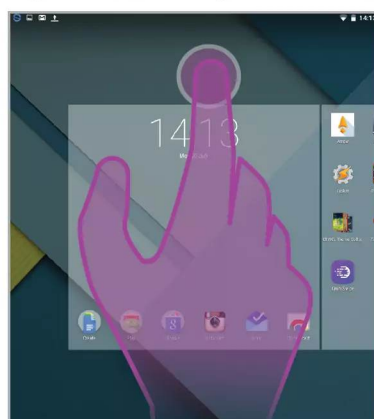
Touch Screen Controls

Modern Android devices no longer rely on physical pressure to register a touch, instead relying on tiny electrical charges in our fingers. This allows for some great touchscreen gestures that help you interact with your tablet.



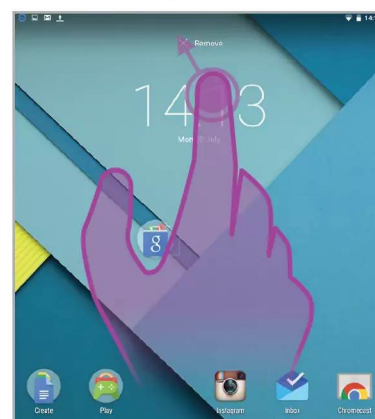
Single Touch

➤ To activate items on the screen such as application and settings icons, to type letters using the on screen keyboard, or to press on screen buttons, you simply (gently) touch them with your finger. The touch screen is capacitive, meaning it is sensitive to the tiny electrical charge in our bodies. This means you only have to tap the screen, not press down hard with your finger.



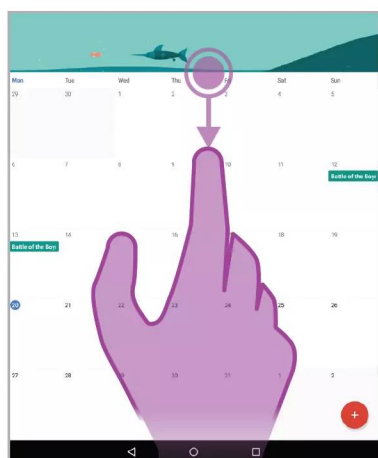
Touch and Hold

➤ Touch and Hold means to tap an item on the screen and not lift your finger until a secondary action occurs. This could be a menu opening, allowing you to customise the Home screen, or an icon lifting off the screen and showing that it can be moved. Another useful tip is that when typing using the Android keyboard, touch and hold will reveal alternative uses for several keys.



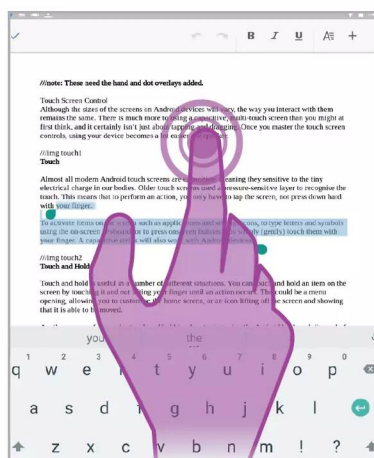
Touch and Drag

➤ To drag items around the screen touch and hold an item for a moment and then, without lifting your finger, move it across the screen until you reach the required position. Lift your finger off the screen and the item will drop into that location, if it's free. You can drag items on the Home screen to reposition them and you drag down the screen to open the Notifications panel.



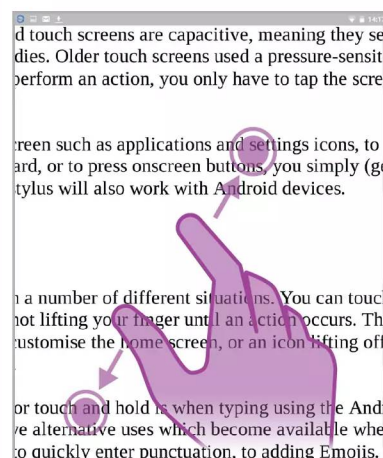
Swipe or Scroll

➤ Many of the menus or web pages that you can access on Android require you to scroll. To swipe or scroll, quickly move your finger across the surface of the screen, without pausing when you first touch it. For example the app drawer lets you slide the screen up or down to scroll through the list and in Calendar, you can swipe quickly across the screen to change the range of time visible.



Double Tap

➤ There are several situations where a double-tap results in an action. For example, tap quickly twice on a web page, map or other screen to zoom. You can double-tap a section of a web page in the Browser to zoom that section to fit the width of the screen. Double-tapping after pinching to zoom in some applications such as the Browser, reflows a column of text to fit the width of the screen.



Pinch and Rotate

➤ In some applications such as Maps, Browser and Gallery, you can zoom in and out by placing two fingers on the screen at once and pinching them together to zoom out or spreading them apart to zoom in. Two fingers can also be used to rotate the view of a picture or map for example, in several apps. The picture follows the rotation of your fingers and turns clockwise or anti-clockwise.

Android Out-of-the-Box Setup

Before you use your Android smartphone, you must set it up out of the box. First of all, make sure it's charged by connecting it to a power source using the supplied cable. You must then insert your Nano-SIM card and follow the setup procedure to get started. This guide helps you along the way through the entire, step by step.

Inserting Your Nano-SIM Card

Before you get started with your Android smartphone, you need to insert the Nano-SIM card you got from your mobile phone service provider. If you have the wrong size card, go to your provider's store and get it exchanged.



1 To activate your Android smartphone, you must first insert the SIM card provided by your mobile phone network provider. If you don't have one, or have the wrong size, go to their store.



2 Use a SIM eject tool like the one pictured here, or maybe a straightened paper clip, and insert it into the small hole next to the SIM slot. The tray then pops out as shown.



3 Place the SIM card in the tray (there's only one way it can go in) and slide the tray back in the slot. Push it in firmly so it snaps into place. Your Android device should recognise it.

SIMs Explained

➤ There are three different sizes of SIM cards available. An older phone might use a standard SIM. Some phones still use the smaller Micro SIM, but most modern phones, such as smartphones, use a Nano SIM, which is smaller still. Because the chip on the SIM is the same size regardless of the type of card, you can convert a small SIM to a larger size with an adapter. But if you have a larger SIM and need a Nano, you must go back to your phone provider's store and get it exchanged, or maybe cut down to Nano size.



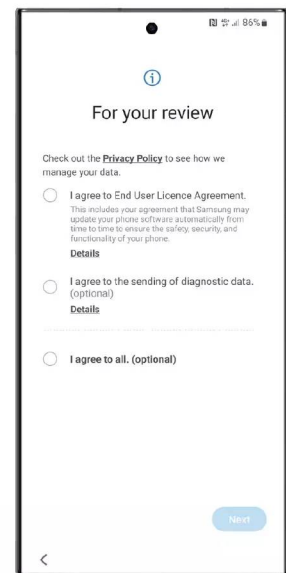
The Initial Setup of Your Android Smartphone



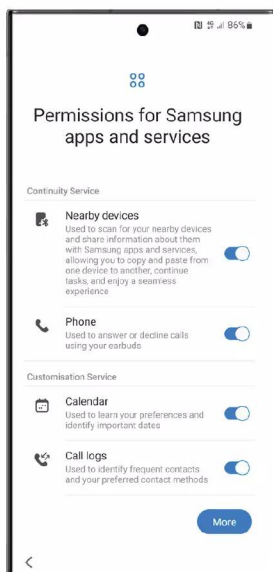
1 Switch on your phone using the button on the side. When it boots up, you're shown a screen showing 'Welcome' and a button marked 'Start' in several languages. Tap the blue Start button; it doesn't matter when.



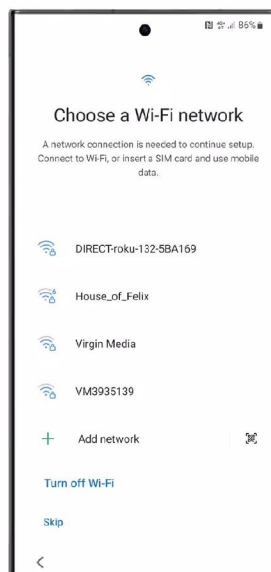
2 On the next screen, set your phone's language. Scroll up until you see the one you wish to use; it might already be ticked. If it isn't, tap it and then tap the blue Next button in the bottom-right corner of the screen.



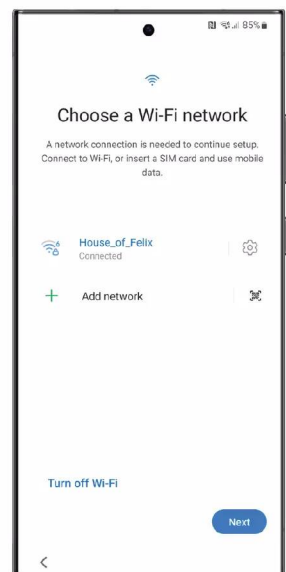
3 Now review a couple of privacy settings. To continue, you must agree to the End User Licence Agreement. You can allow the phone to send diagnostic data too. It's sent privately, though doing so is optional. Tap Next.



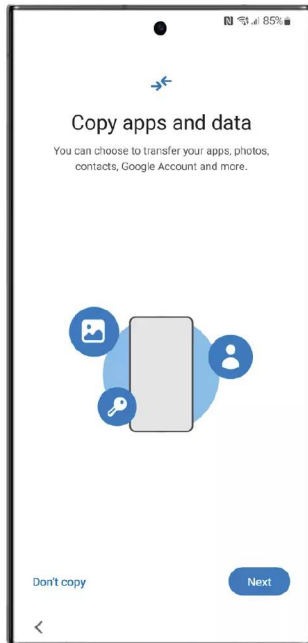
4 Now it's time to set permissions for Android apps and services. Unless there's a specific reason you don't want to use a particular service, leave them all ticked. Tap More to see the rest of the page, then finally tap the Agree button.



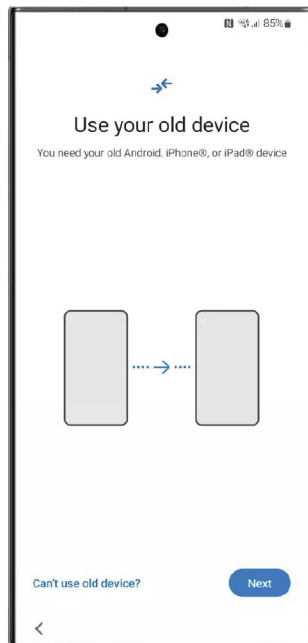
5 The phone then scans for local Wi-Fi networks. Your own should appear on this screen. When it does, tap it. Enter your router's passcode, and leave the Auto Reconnect switched on, before tapping the Connect button.



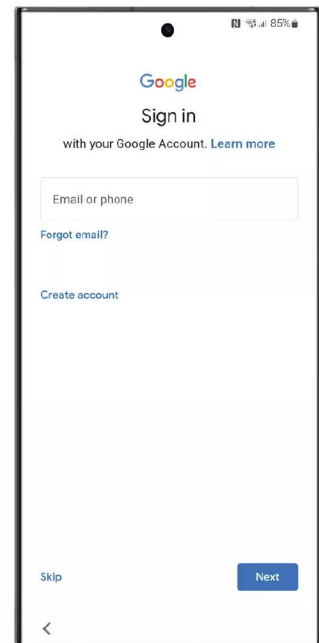
6 When your phone has successfully connected, the Wi-Fi icon appears at the top of the screen, and the network list shows which one you're currently connected to. Now tap the Next button (bottom right).



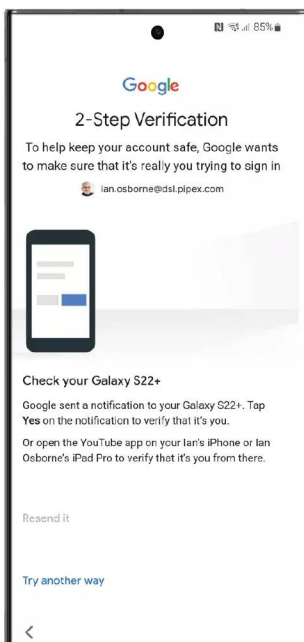
7 The phone then takes a few minutes to get itself set up, before inviting you to Copy Apps and Data from your existing phone (iPhone or Android). Tap Don't Copy if you don't have a phone, or don't want to copy data.



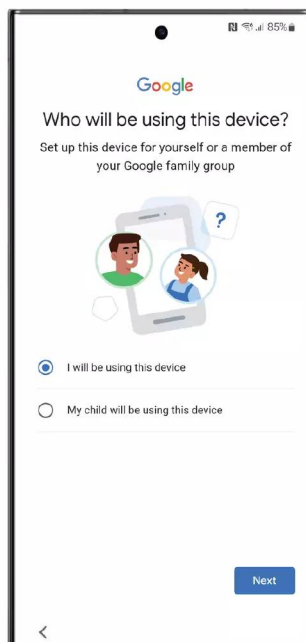
8 If you tapped Next in the previous step, follow the on-screen instructions to copy data such as contacts, calendar events, notes and in some cases, apps from your old phone to your new one. You might need a cable.



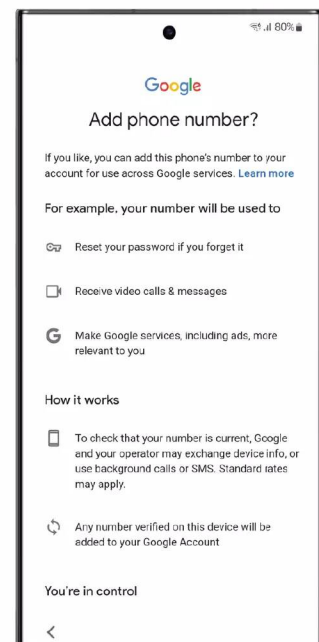
9 Whether you copy your data from an old phone or not, you must sign into your Google account. If you don't have one, tap Create Account. If you do, enter your Google email; tap Next, then the password; tap Next again.



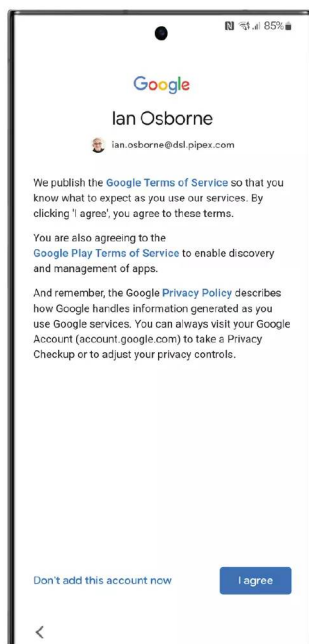
10 You may be asked to verify that it's actually you who's trying to log in. If so, open the YouTube app on one of the devices listed, and confirm. If you can't, tap Try Another Way and follow the on-screen instructions.



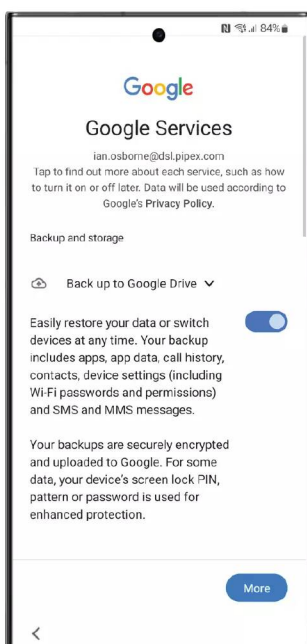
11 After this confirmation, you're asked whether you're setting up the phone for yourself or for a child. If the latter, follow the on-screen instructions for parental controls. If it's for you, select that option and tap Next.



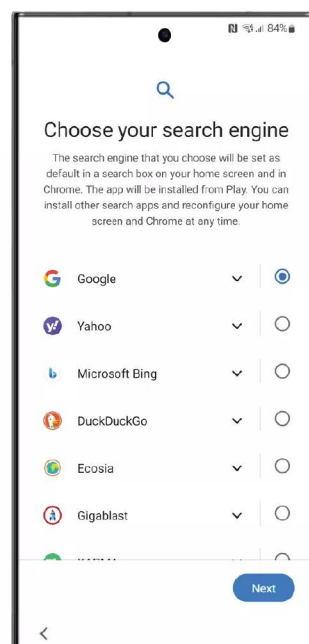
12 If the phone number on your SIM isn't associated with your Google account, you can have it added now. Read about the services this offers, and if you'd like to do this, scroll up and tap 'Yes, I'm In'.



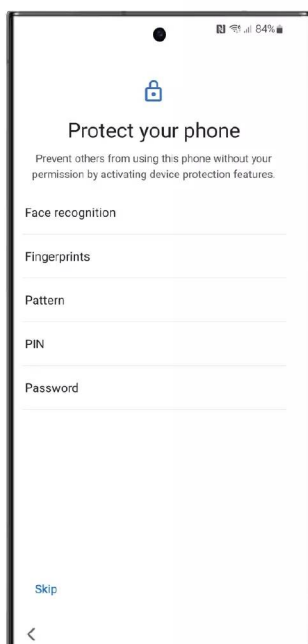
13 The next step is simple enough. Tap 'I Agree' to accept the Google terms and conditions. You can tap the link in the text to take a look at those terms and conditions and those for Google Play if you want.



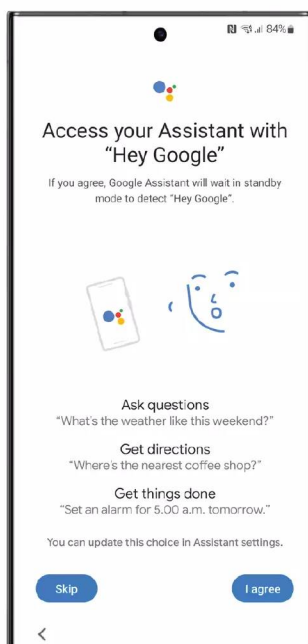
14 You must now decide on a series of options, such as backing up to Google Drive and sending usage and diagnostic data. Make your choices, tap More, and make some more choices before tapping Accept.



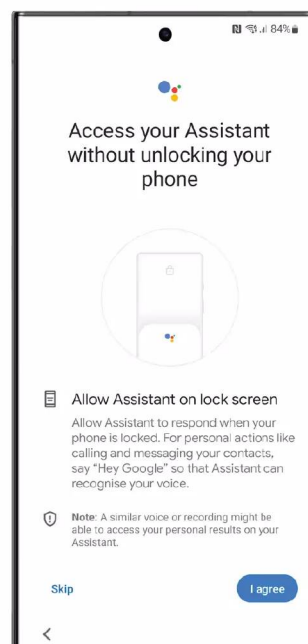
15 Which search engine do you want to use as your default for web searches? Most people choose Google, but there's no obligation to do so. Tap your choice from the list offered, and then tap the Next button.



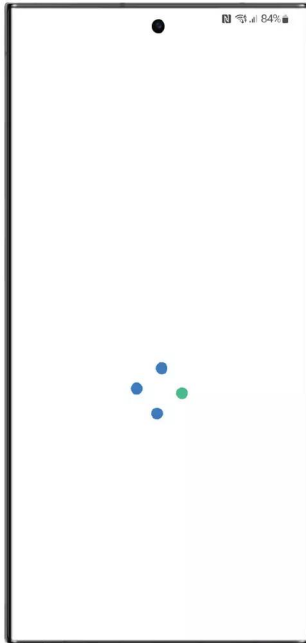
16 How do you want to protect your phone against unauthorised use? They're offered in descending order, the top one being the best. Choose one, and set it up by following the on-screen instructions.



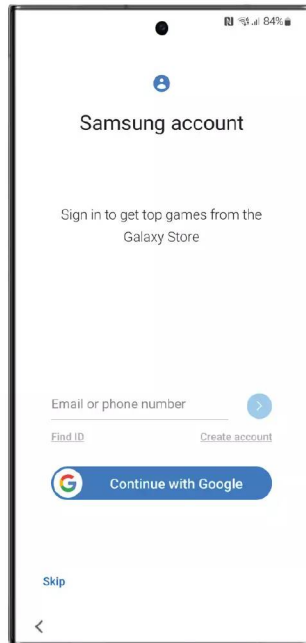
17 You can interact with your phone using Google voice commands, something we cover later in the book. To set this up, tap I Agree and go through the steps offered on the screen to help it recognise your voice.



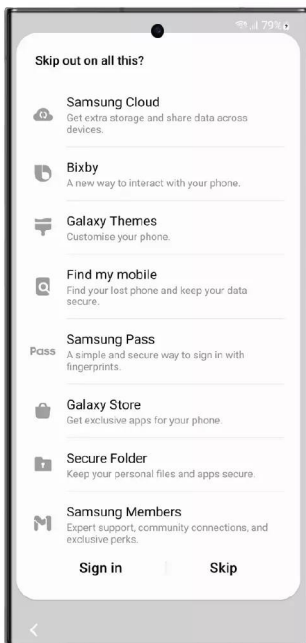
18 Do you want to be able to access the Google Assistant without unlocking your phone, so you can use 'Hey, Google' when your phone is locked? If you think this is too much of a security risk, tap Skip. Otherwise, tap 'I Agree'.



19 We're almost finished now. There follows a lengthy setup time, which can take several minutes. Don't interrupt it; leave the buttons alone and wait. The phone eventually moves on to the next set in the setup.



20 Do you want to be able to pay for goods and services with Android Pay? This allows you to make a contactless payment on one of your cards by holding the phone near a card reader. Sign in here to activate it.



21 You're now presented with a long list of services and features for your Android phone. You can set them up now by tapping one and following the instructions, or you can tap Skip and set them up later if you wish.

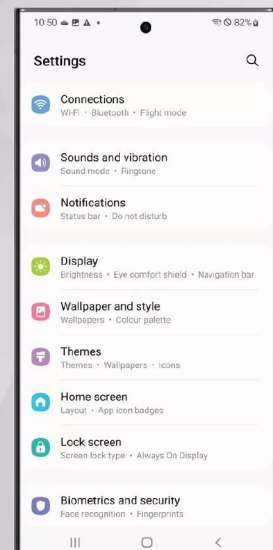


22 You're done! Tap Explore your Galaxy for some tips and hints about using your new Android-powered phone, or tap the Finish button to go straight to the phone's desktop and start using your Android device.

Changing Settings



➤ If you want to change settings you made during the setup process, you can do so afterwards. First of all, open the Settings app; the one with the cog icon on a grey background. You can change a lot of the phone settings here.



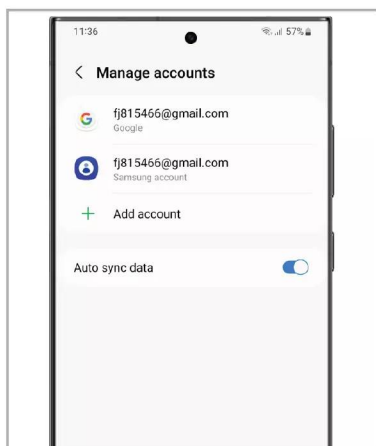
➤ You can make all sorts of changes here, not just to the settings you set up when you first powered up your phone. These include Bluetooth connections, Wi-Fi networks, Privacy permissions, backup services and more.



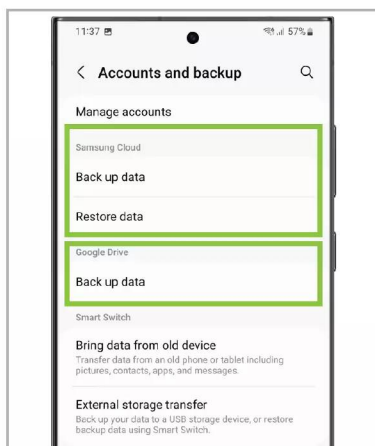
Resetting Your Android Device

If you want to sell or give away an Android device, perhaps because you bought a new one and have no need for the old model, you should first reset it to factory conditions to remove your personal data. Here's how.

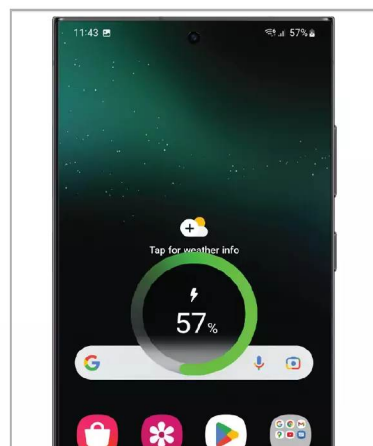
Preparing to Reset



1 To show that it's you doing the reset, you'll need to enter security information. If you can't enter the information, you won't be able to restore your data to the device. Therefore, you will need to know the Google account information that is currently being used on the device.

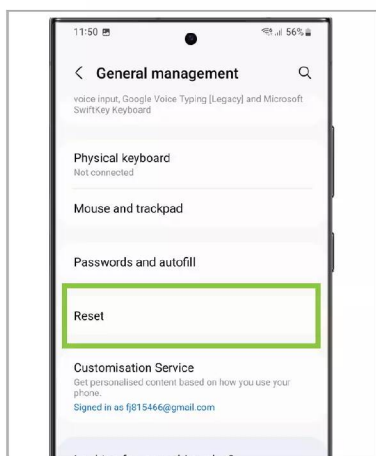


2 A factory data reset erases your data, so you should back up what you want to keep. Google account data can be restored, but all apps and their data on the device will be uninstalled. Open your device's Settings app, tap System > Accounts and Backup. Tap Back Up Data, on both Google Drive and any third party Cloud.

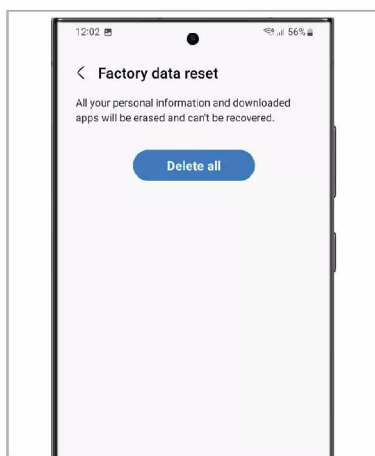


3 A full factory reset can take a long time (up to an hour), so plug your device into a power source and keep it plugged in until the reset completes; connect your device to Wi-Fi or your mobile network too. When the reset completes, you'll need to be connected to sign in to your Google account.

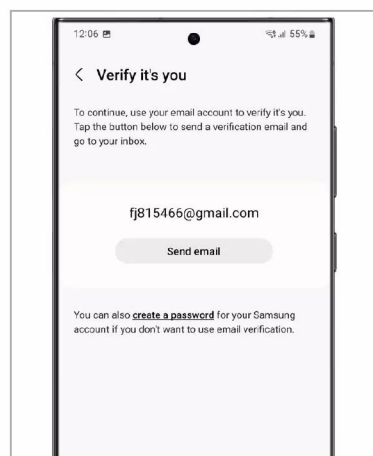
Factory Reset Your Device



1 Open the Settings app and tap General management > Reset. If you have one set up, you may need to enter your PIN, pattern or password at this point, to tell Android that it is you trying to reset the device. On some devices, factory reset may be found under the Backup & reset heading.



2 Tap Factory data reset then tap the button. In some cases, this is where you will need to enter your PIN, pattern or password. To erase all data from your device's internal storage, tap Delete all. When your device has finished erasing, pick the option to restart.



3 You may need to verify it's you trying to reset your phone. Tap Send email, and you're taken to the Gmail app, where you can verify your identity. When you're done, tap the three-lines icon in the bottom-left, swipe to the open Settings app and tap it to open. Your device is then reset.

Add and Use a microSD Card

Many Android devices, unlike Apple's range, offer the ability to expand the storage by inserting a microSD memory card. On modern devices, the capacity can be as much as 1TB, although this may vary and you should check before you buy a large SD card. Inserting the card is relatively simple, however it might not be obvious to someone doing it for the first time.

Choosing a microSD

Some memory cards may not be fully compatible with the device. Using an incompatible card may damage the device or the memory card. If you buy your memory card from a well known mobile store, you should be OK.



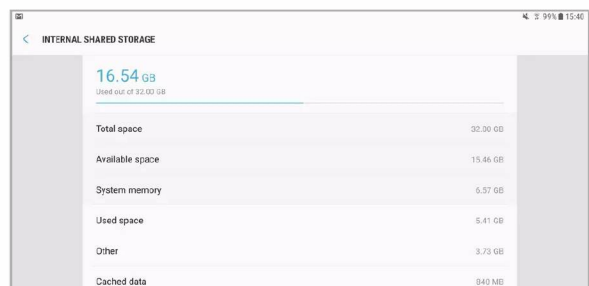
Card Capacity

➤ As already mentioned, not all devices can read all sizes of microSD card. The most recent Android devices can use a card of up to 1TB, but your particular model might be limited to a smaller capacity, or not be able to use a memory card at all. Check this before buying a microSD card for your device.



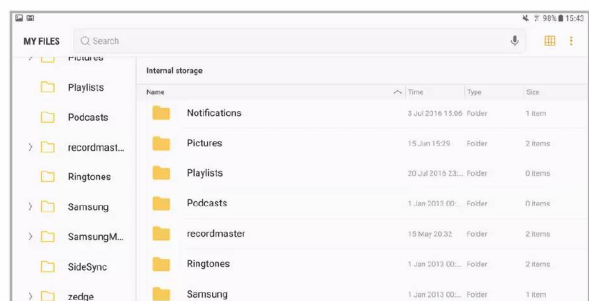
Recycling Cards

➤ You may have a microSD card in an old device you can use. Be aware that some memory cards may not be compatible with your device depending on the memory card manufacturer and type. To view your device's maximum memory card capacity, refer to the producer's website.



File Systems

➤ The device supports the FAT and the exFAT file systems for memory cards. When inserting a card formatted in a different file system, the device will ask to reformat the card or will not recognise the card. If the device does not recognise your memory card, format it on your computer.



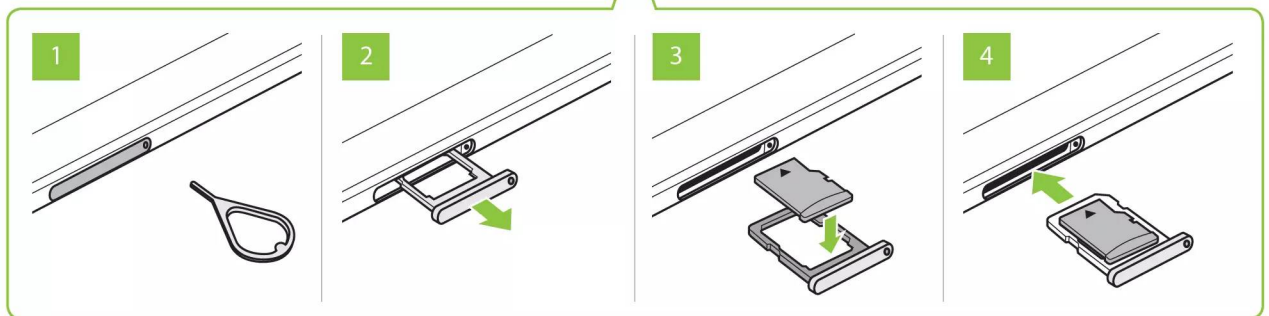
Card Maintenance

➤ Once you have chosen a microSD card, remember that frequent writing and erasing of data shortens the lifespan of memory cards. When inserting a memory card into the device, the memory card's file directory appears in the My Files > SD card folder. You can manage files from here.



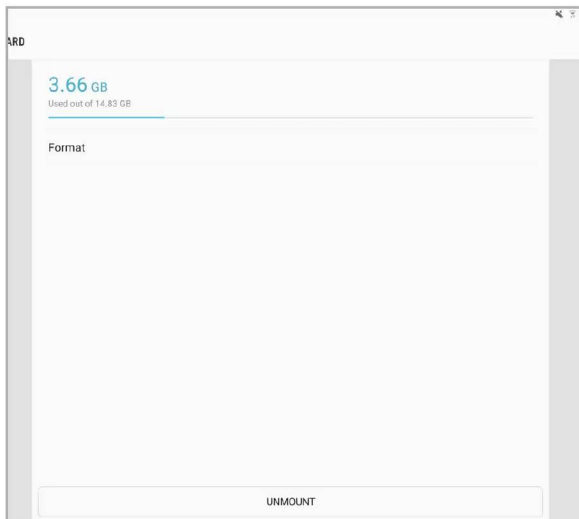
Inserting the microSD

Many Android devices with an SD card slot use the same mechanism for inserting and removing it: a sliding tray which needs to be opened with a special tool (should have been supplied with the device).



Removing a microSD Card

Here's how to remove your Android device's SD card. Never do this while the device is transferring or accessing information, because doing so can cause data to be lost or corrupted or damage to the memory card or device.



1 Before removing the memory card, first unmount it. To unmount a working microSD card, head in to the device Settings > Device maintenance > Storage > Storage settings > SD card > UNMOUNT. Wait for the message to appear on screen telling you the card is safe to remove.



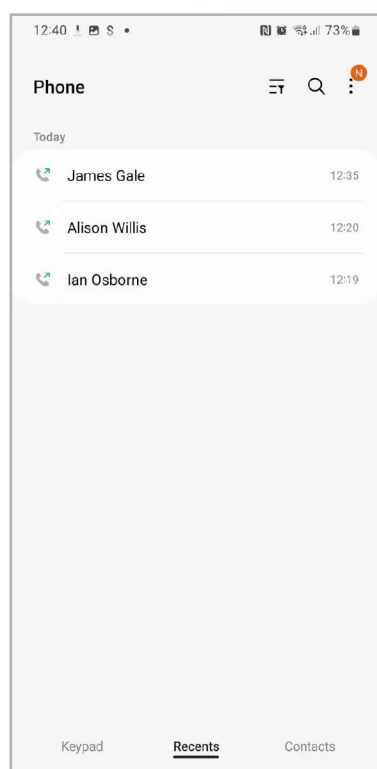
2 Insert the ejection pin into the hole on the memory card tray to loosen the tray. Pull out the memory card tray gently from the memory card tray slot. Remove the memory card. Insert the memory card tray back into the memory card tray slot. If concerned, turn off your device before doing this.

Making and Receiving Calls

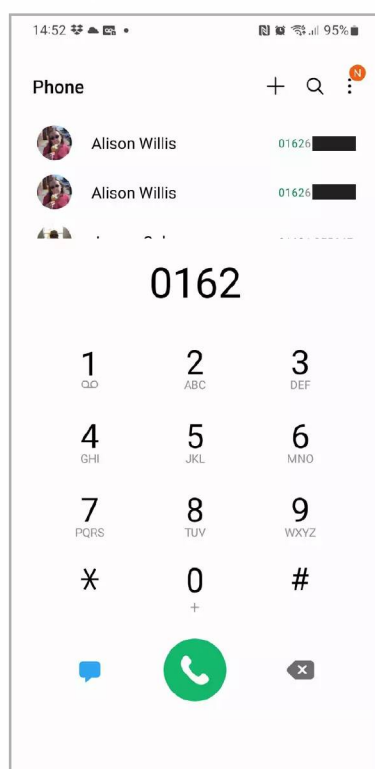
While your Android device is an incredibly powerful device with lots of bells and whistles, let's not forget that its main function is as a phone to make and receive phone calls. Making a call on your new Android device might seem like the most simple of things but there are actually several ways to initiate a call, as well as control over who calls you. Plus there are a few settings you can change to make this simple phone function even simpler.

Dialling a Number

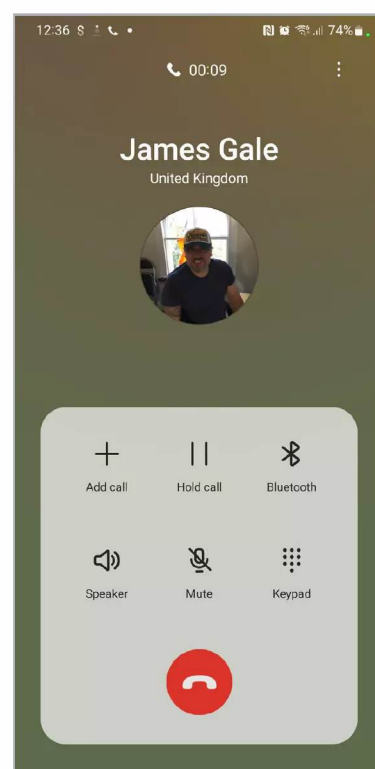
There are lots of different ways to initiate a call on your Android phone, but if you know the number you want to contact, it's usually fastest to simply open the keypad and type in the number on the screen.



1 To begin making a call on your Android device, tap the phone icon on your Home screen and, by default, the call log screen (Recents) will open. This lets you quickly return a call to a recent caller. If the person you want to call is not in the call log, tap the Keypad button at the bottom of the screen to enter a number manually.



2 The Android phone dialler is pretty much standard and should be familiar to anyone who has used a phone in the last twenty years. Simply use the keypad to enter the number for the contact you want to call. As you type matching numbers from your contacts list will be displayed for their instant selection.

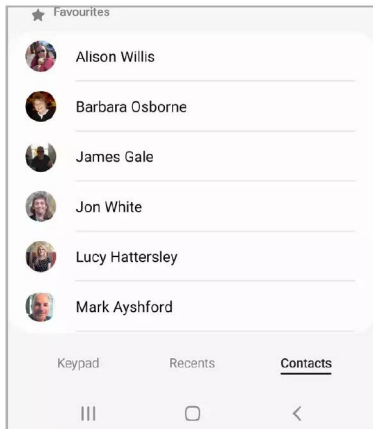


3 When you have entered the number tap the green Call button to start the call. Tapping the green video camera button (if there is one on your device) next to the call button will initiate the video Call option instead of a voice call. The number will then be dialed. You can cancel the call by tapping the red phone button.

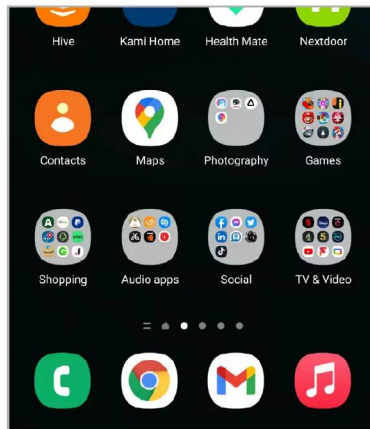


Dialling From Contacts

On your Android device there are a couple of different ways to call a number in your contacts list.



1 Tap the phone icon on the Home screen and then tap the Contacts tab to display your contacts list. Scroll down to the contact you wish to call and touch their name to see the available options: call, video call or message. Alternatively, swipe to the right across the contact itself.



2 You can also open your contacts list directly rather than going through the dialling screen. Open the main apps list from your Home screen and look for the Contacts app. Once Contacts is open you can scroll to or search for the contact you wish to call. You can even search by voice by tapping the mic.



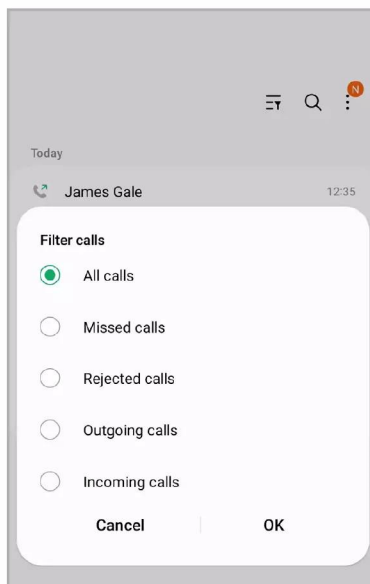
3 When you find the contact you want to call, tap their name to see the information screen. Here you can see the number and any associated numbers, email addresses, etc. You will also see buttons to call, video call or message the contact. Tap the phone button to make the call.

Viewing Call Logs

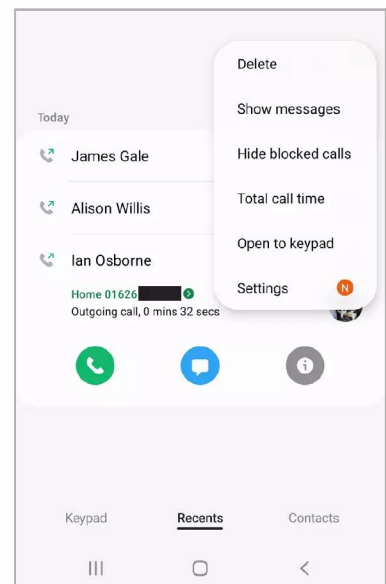
Your calls are logged for future reference. You can view these missed and received call logs at any time.



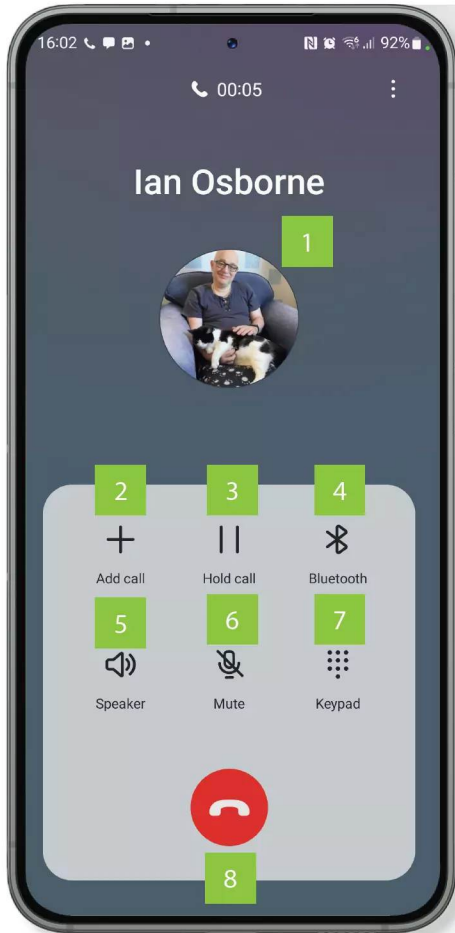
1 Either touch the phone icon at the bottom of the Home screen and use the tabs to open the call log (Recents) or open the main apps list and look for Call History. By default the initial view is a full list of all calls and messages received, made and missed, listed with name and number.



2 You can change this view by pressing the Menu/More button and selecting "View By" or "Filter". You can then choose from All Calls, Missed Calls or Rejected Calls. Just as with your contacts list, you can quickly dial a number in the Log by swiping it to the right or swipe left to message.



3 To protect your privacy you can delete your call log. To do this press the Menu/More button while viewing it and then select "Delete". You can then select all of the history or just individual calls and messages by tapping the appropriate checkboxes.



Call Options

During a call you have several useful options, including the ability to mute the call, all easily accessible from the dialler call screen. Exact options may vary between devices, but they're all roughly like this one here.

1 Call Details

> The name (if known) and possibly number of the person you're talking to is displayed at the top of the screen, along with a contact photo if one is available.

2 Add Call

> Dial and call a second number whilst keeping the current call open. Once you tap the Add Call button, the dialler pad opens on your screen.

3 Hold Call

> Tap this icon to put a call on hold for a while, maybe if someone's at the door or you need to look for a pen. While holding the icon changes to Resume Call.

4 Bluetooth

> This icon allows you to quickly switch the call to a Bluetooth headset or microphone if you have one set up and paired with your device already.

5 Speaker

> Activate or deactivate the speakerphone. When using the speakerphone, speak into the microphone at the top of the screen and keep the device away from your ears.

6 Mute Mic

> If you need to talk with someone without the person on the other end of the call being able to hear, you can use this button to turn off the internal microphone.

7 Keypad

> Hides or shows the dialler keypad on screen. Useful if you need to enter an extension number or enter options in an automated caller system.

8 End Call

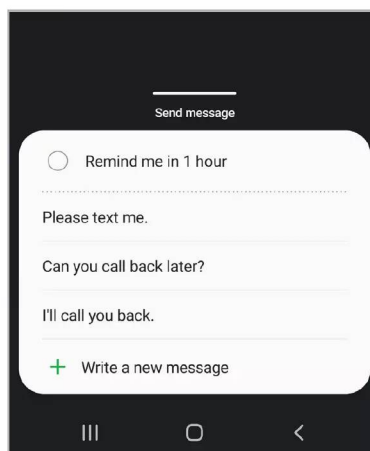
> Tap the red phone icon to end the current call (not all calls, if connected to more than one). This button is the same when you're currently in a video call.

Reject a Call

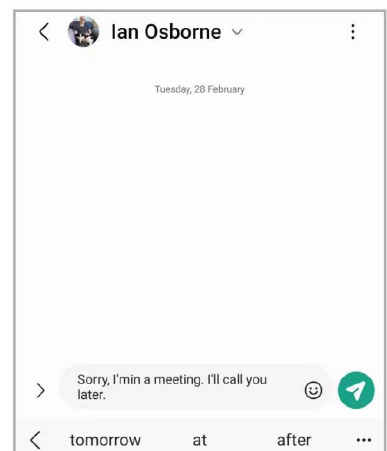
You can reject calls in three ways: ignore it, tap the red Reject Call button or reject it with an explanatory message.



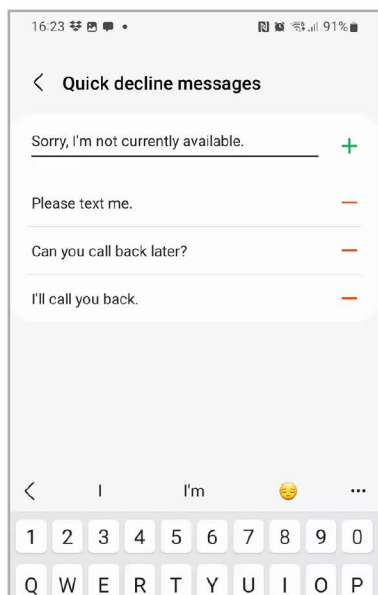
1 You can reject any call by dragging the red Reject button out of the circle. This will result in the caller hearing a message explaining you are unable to take their call. If you just want to silence your ringtone without rejecting the call, you can simply press the Down Volume button.



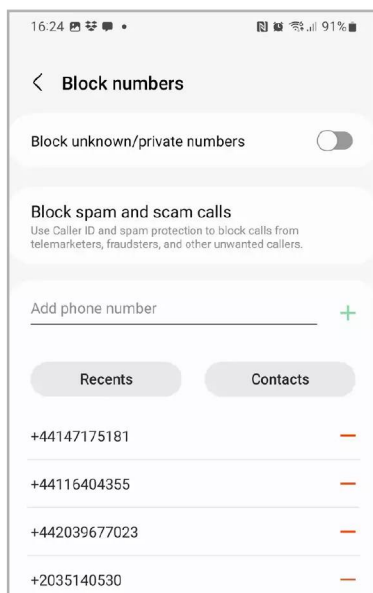
2 If you want to reject a call with an SMS message, drag the Reject Call with Message tab up over the screen. You will see a list of pre-set messages that you can choose from. Tap one of these messages or tap Create Custom Message. You can then write a message of your choice.



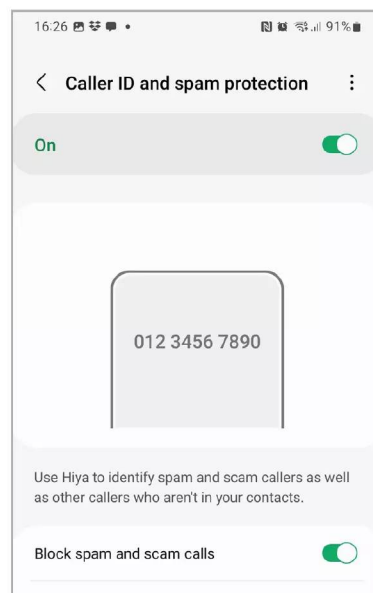
3 As soon as you select a message or start a custom message, the call will be rejected and the message will be sent to the caller within a few seconds. If you don't like the pre-set messages and don't want to have to write a custom message each time, you can create new ones in the settings.



4 To create new or additional call rejection messages, open the Apps screen and tap Phone > More > Settings > Quick decline messages, enter a message and then tap the + button. To remove the pre-set messages, tap the – button next to each one.



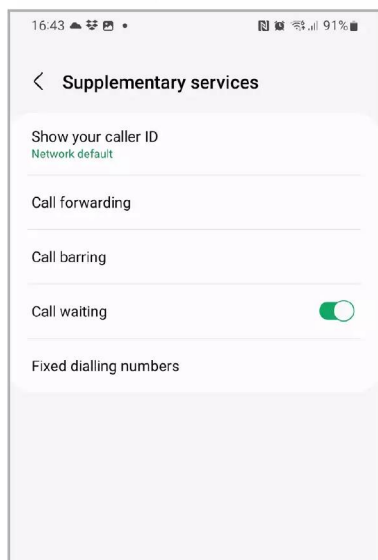
5 You can also select phone numbers for Automatic Rejection. Tap the Block Numbers option and enter a number that you want to reject or tap the Contacts icon to choose from contacts. Tap the + button to add the number to the list. Tap the – button to remove a number from the list.



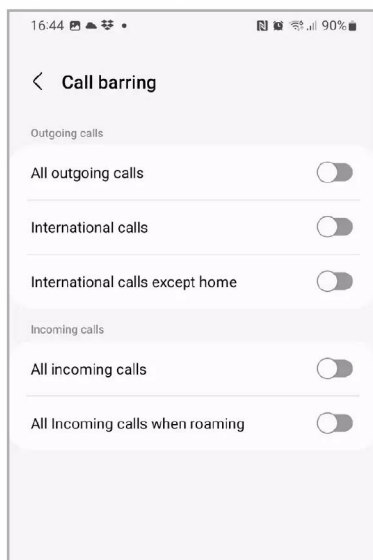
6 You can also reject all unknown numbers by tapping the slider above the reject list. Tap 'Block spam and scam callers' to turn on spam protection, and choose whether to block all spam calls or only those deemed a high risk. It's not perfect, but it helps.

Call Barring

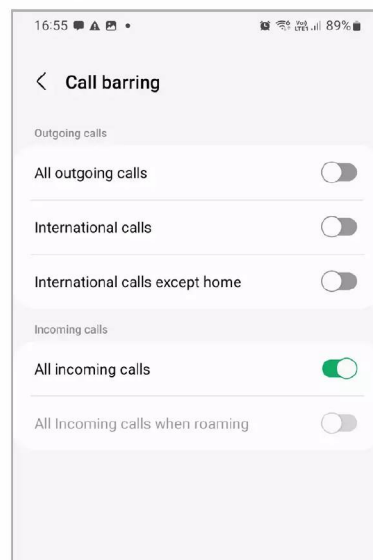
You have complete control over all outgoing and incoming calls thanks to the Call Barring option.



1 Call barring options can be found by pressing the More button while on the phone dialler and then Call Settings > Supplementary services > Call barring. You can then choose to set the call barring options for either voice calls or video calls independently. The exact options will vary by device/OS.



2 You're now shown the various call barring options open to you. Here you can choose to block all incoming calls, all outgoing calls, outgoing international calls and incoming calls while roaming. Use the sliders next to each option to activate and deactivate it.



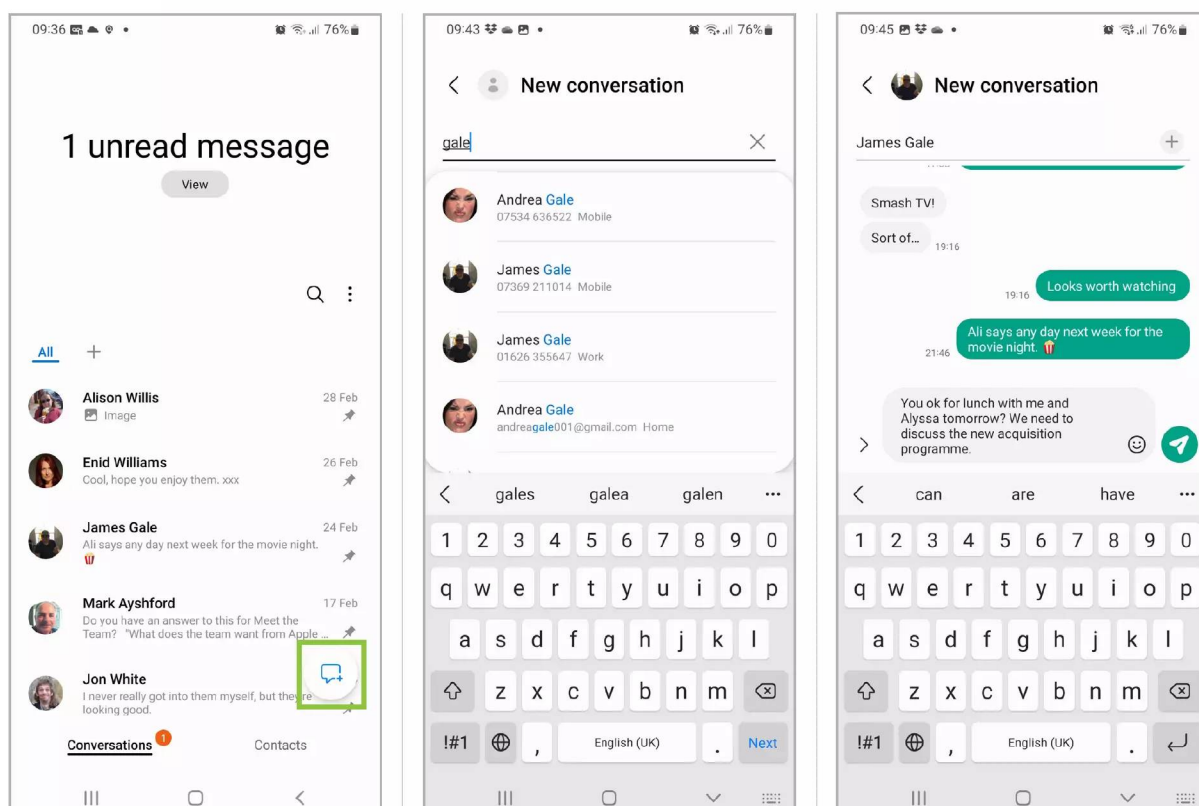
3 The Call Barring settings might be password protected, meaning that you're asked to set a password when you first activate one of the barring options. Password protection is useful if you want to limit the call options on a phone being used by your children for example.

Sending SMS Messages

Sending text messages doesn't change much from phone to phone, so if you have sent an SMS message in the past, you shouldn't have any problems doing so on your Android device. However, there are a few useful extras that the Galaxy can do that you might not have seen before; many of them will almost certainly become an essential part of sending text messages. Let's take a look at how you can make SMS messaging a breeze.

Create a New Message

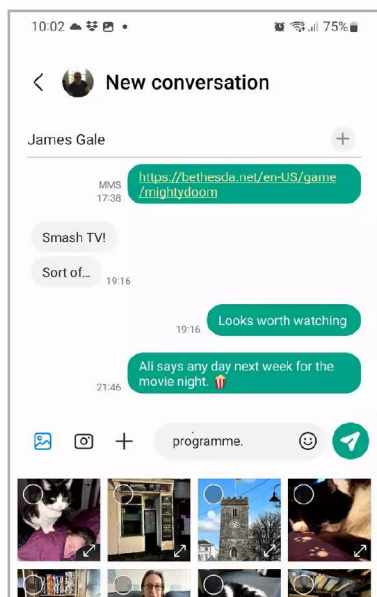
Despite how simple an act it might seem, there are a number of options to consider when composing and sending SMS messages on your Android device. Let's take a look at the Android Messages application.



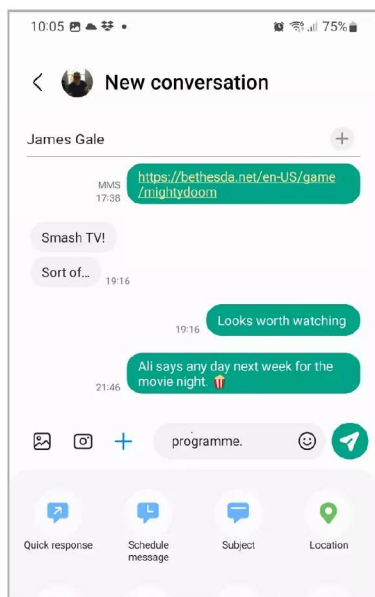
1 To start a new message, first of all, tap the Messaging app icon on the Home screen. On many Android devices, the Messages app icon is in the dock at the bottom of the screen. Tap the New Message icon at the bottom right of the screen to begin composing the message.

2 In the top box, either type the phone number that you want to message, the name of the contact, or tap the Contacts icon beside the box and choose who you want to message from the contacts list. You can add more than one contact as a recipient of the message.

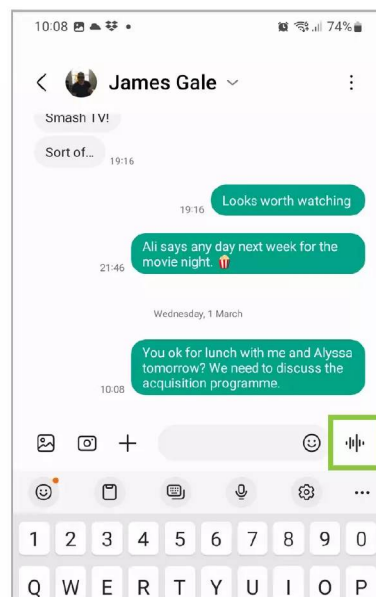
3 You can then start to type your message in the text box just above the on-screen keyboard. For more information on operating the on-screen virtual keyboard, take a look at the tutorial on using the keyboard elsewhere in this book. When finished, tap the Send icon, showing the paper dart.



4 If you want to attach a photo to the message, tap the chevron to the left of the text field, then tap the Photo icon. The photos on your phone are shown. Tap the ones you want to send, and choose whether to send as a link or a picture.



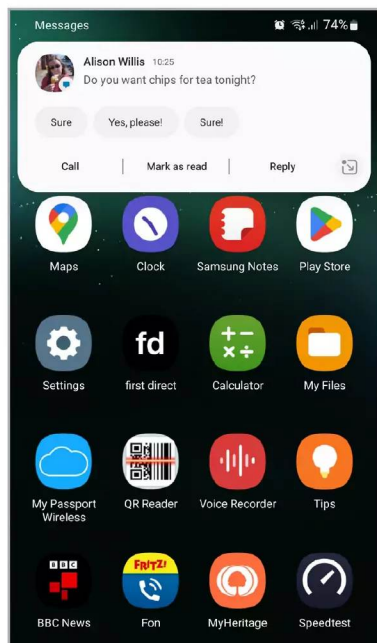
5 Alternatively, tap the Camera icon to take a new photo or video to attach to the text message. Tap the Plus icon and you're presented with a window full of options such as scheduling the message, adding another sort of attachment and more.



6 The screen then returns to the conversation view. This shows your recent messages to that contact, as well as replies. Note the waveform icon to the right of the text input field. Tap and hold it to record an audio message to send.

Reply to Messages

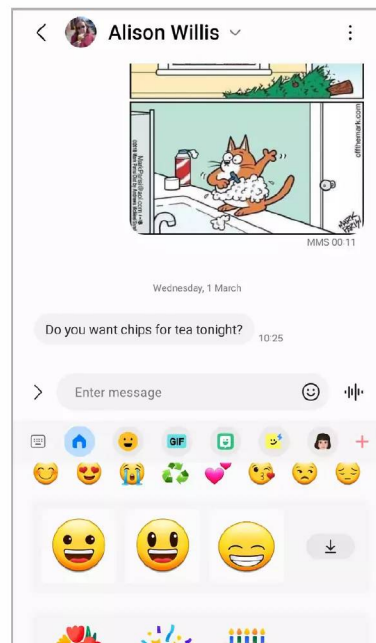
You can reply to messages from a conversation or the notification when it appears in the status bar.



1 When you receive a message, a notification will appear in the status bar at the top of the screen. Drag the bar down to see your notifications. To reply to a message, tap it in the Notification panel.



2 To reply to an older message, tap the Messaging app icon and you will see a list of your messaging conversations. Tap the name of the person you want to reply to and you will see a history of your messages.



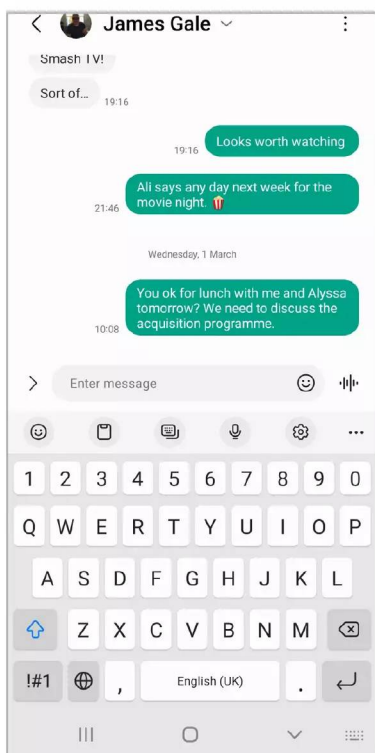
3 Tap in the Enter Message box and the keyboard will pop up. You can then type your reply, attach a file and send the message as normal. Your reply will appear in the message conversation view.

Master the Android Keyboard

If you are not used to typing on a phone or tablet, using the tiny keyboard can seem like a challenge at first. However, the keyboard found on most Android devices has been evolving and improving ever since the first touchscreen phone appeared. If you just want to type a quick email, it can be as simple as it needs to be but explore a bit further and you will see that it is packed with features designed to make it easy to use.

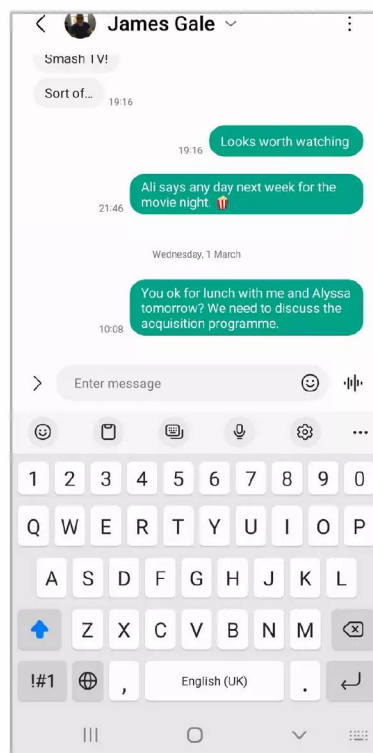
Essential Keyboards Tips

The keyboard is updated almost every time Android is updated, so the exact features you have access to on your device might vary, depending on the version you are using. Here's a guide to the newest version.



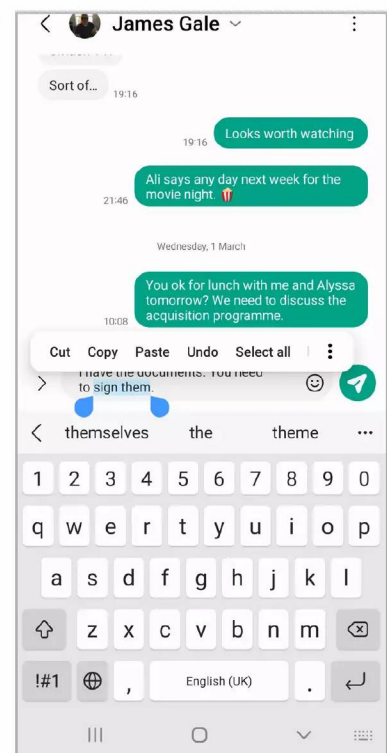
Tip 1 – Hide or Reveal

➤ Tap anywhere you can enter text, such as the text box in the Messages app or the Search field in just about any app, and the virtual keyboard appears. If you want to hide it again, tap the down-pointing chevron at the foot of the screen, which has replaced the Back button and it disappears.



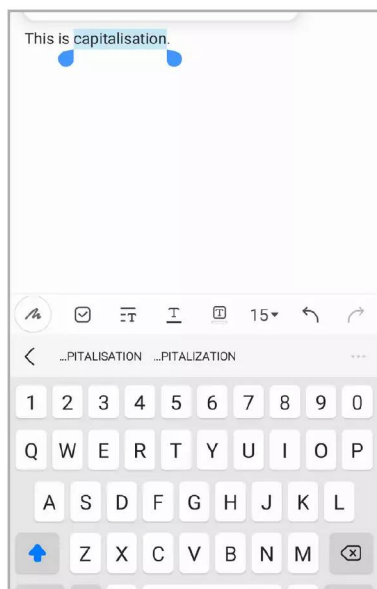
Tip 2 – Toggle Caps Lock

➤ To type a capital letter in any app, tap the Shift key once. The next letter you type will be upper case, after which it will automatically switch back to lower case (this is Sentence Case) as you type. If you need to type all in upper case, either tap and hold or double-tap the Shift key.



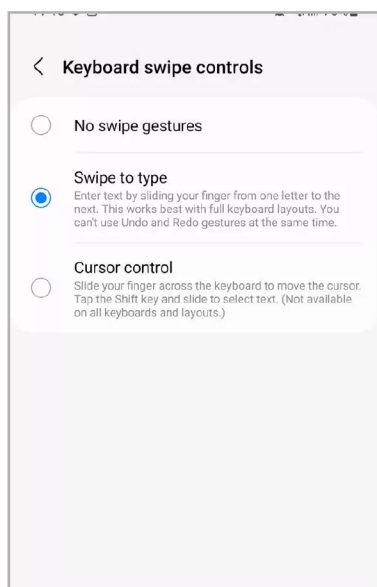
Tip 3 – Selecting Text

➤ To select a single word or section of text, touch and hold or double-tap on screen within the text. The word will be highlighted, with a tab at each end of the selection. You can then drag the tabs to increase the text selected. To place the cursor within a word, just tap where you want it to appear.



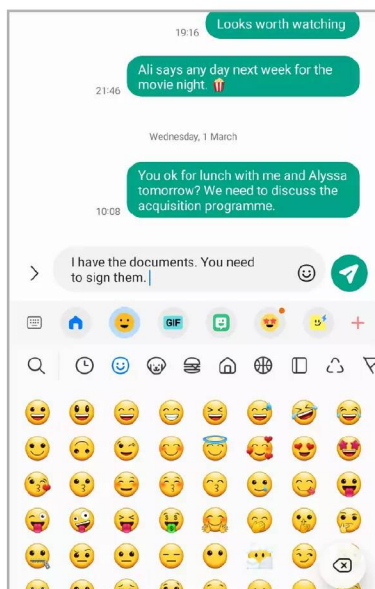
Tip 4 – Capitalisation

➤ To change the capitalisation of a word you've already typed, you can simply select it (see the Selecting Text tip) and tap the Shift key once to capitalise the first letter, or twice to capitalise all the text. You're offered the capitalisations as replacements in the strip above the keyboard.



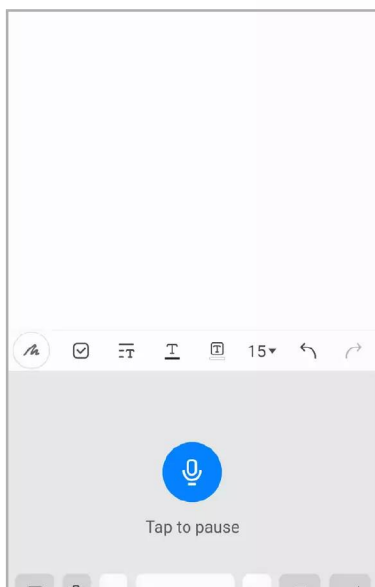
Tip 7 – Gesture Typing

➤ You may need to enable this feature in Settings > General management > Keyboard settings > Swipe, Touch, and feedback > Keyboard swipe controls. You can then slide your finger across the keyboard instead of tapping the keys. Lift your finger when the word appears.



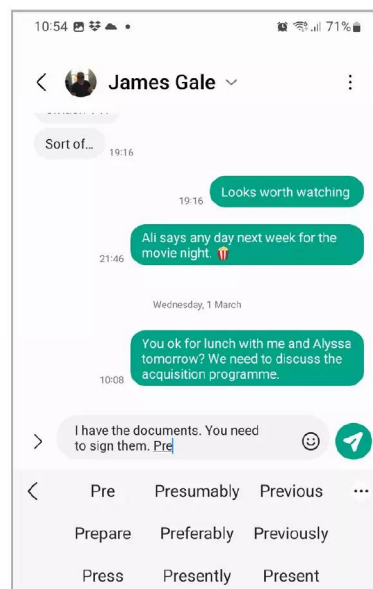
Tip 5 – Using Emojis

➤ Most Android device keyboards now have a dedicated emoji icon in the quick access bar along the top but there might also be an emoji key on the keyboard. Each section of the emoji menu will have multiple pages, swipe left or right to move between them. Different apps feature different emojis.



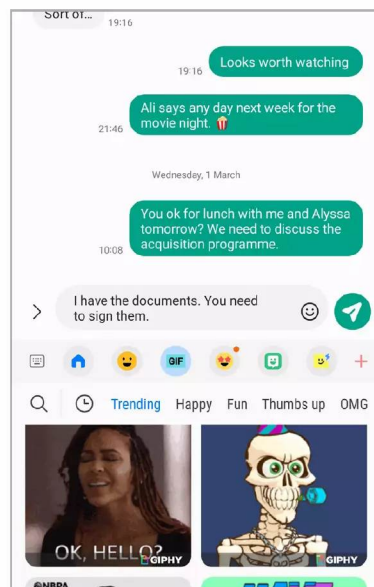
Tip 8 – Voice Typing

➤ On Android devices, you can input text by speaking. To type with your voice, tap the mic icon above the keyboard and say what you want to type. In some languages, you can enter punctuation by saying it, for example "comma", "full-stop", "question mark" or "exclamation mark".



Tip 6 – Alternative Words

➤ Android will try to guess which words you are typing and show them as suggestions above the keyboard. You can speed up your typing by tapping the correct word as it appears, to insert it into the text. Tap the small arrow (or the three dots icon) to see a bigger list of alternative words.



Tip 9 – Stickers and GIFs

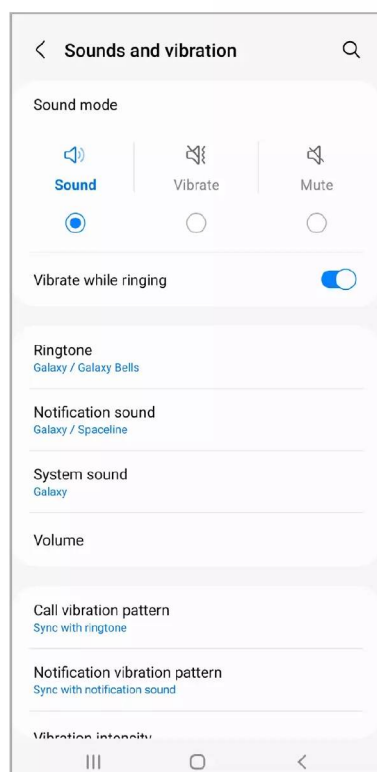
➤ The newer Android keyboards gives you quick access to several additional elements with a bar across the top, including animated pictures to use. Tap the three-dots icon, then select GIFs and choose what you want to add to the keyboard. You can then add GIFs to your text messages and more.

Customise Alerts and Ringtones

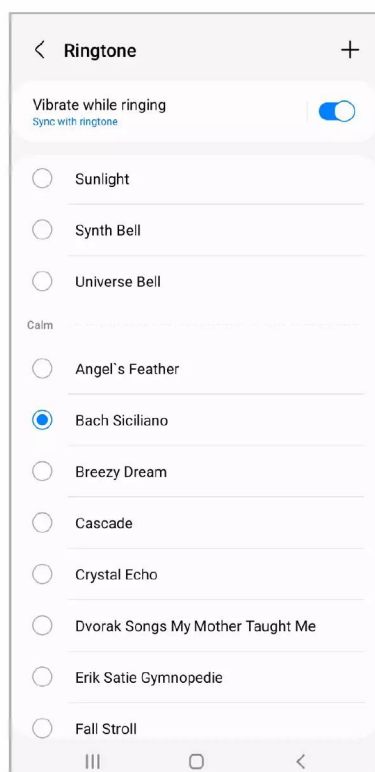
Head to Settings > Sounds and vibration on your device and in the Ringtones, Notification Sound and System Sound sections there are dozens of presets available; they range from simple bells and beeps, to ethereal melodies and dance tunes. You can even set individual sounds to specific contacts. In the event that you aren't happy with the standard ringtone and alerts, you can change almost every element of the sound profile on your device.

Change the Default Ringtone

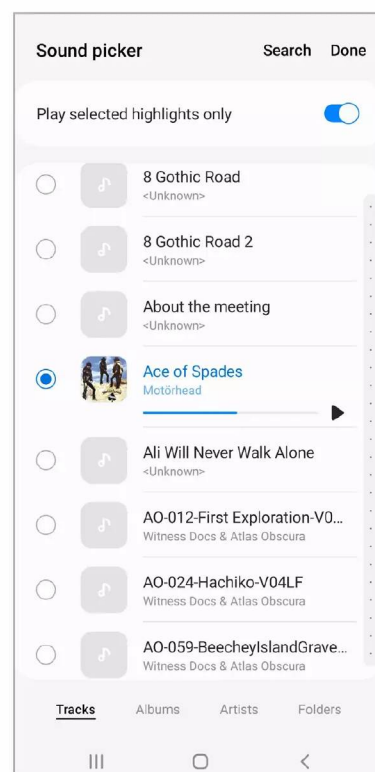
You can customise most of the various sounds used on your device, even if that just means turning them on or off, from the ringtone to keypad tones. Here's a guide to personalising the sounds on your Android device.



1 Open the main Settings app and look for "Sounds" or "Sounds and Vibration". You can access almost all of the sound options on your device from this settings menu. Scroll down until you see the Ringtone heading, tap it and you will see a list of all of the available ringtones.



2 Select a ringtone and a preview of it plays. Tap the Back button if happy with your selection. Scroll down to the bottom of the list to see the option to 'Add from phone' or 'Add ringtone' (depending on device). If it's not there, tap the + icon in the top-right corner to get there.

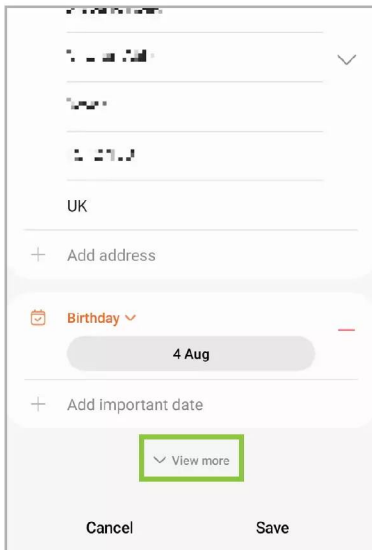


3 This lets you use music and sound files as your ringtone. Tap the option and then choose where you want to look for the audio file, that links to the default ringtone. Select a song or audio file to use as a ringtone. You can also choose whether it plays from the beginning or just a highlight.

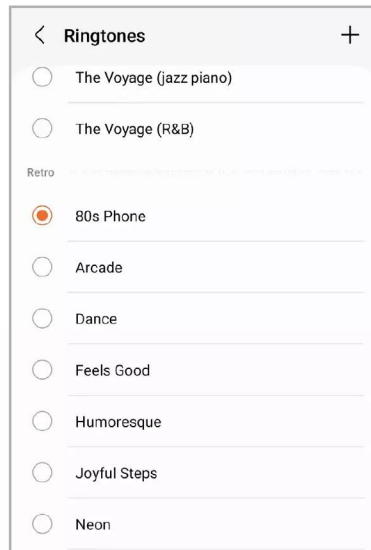


Assign a Ringtone to a Contact

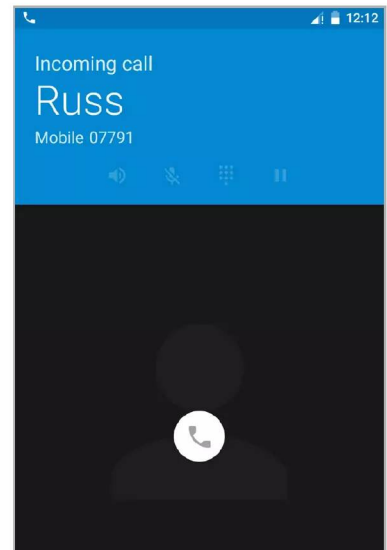
You can assign a different call ringtone to every single person in your contacts if you wish.



1 Open the People or Contacts app on your device. Scroll down to and select a contact from the main list to see that contact's details. Tap Edit at the foot of the screen, scroll all the way down and tap the 'View more' link.



2 Scroll down again and tap the newly-revealed Ringtone link. You're shown the Ringtone picker again. Tap one to preview it, and when you've found one you like, tap Back to see that ringtone associated with the contact in question.



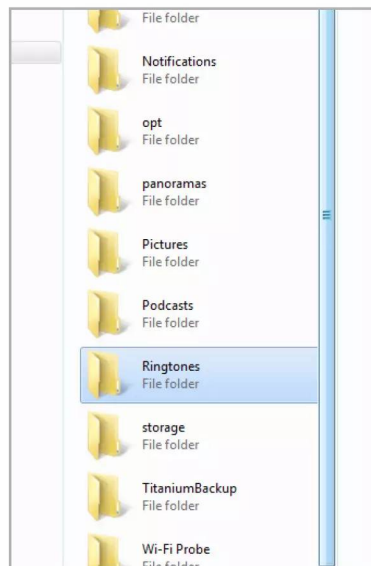
3 When the contact calls you from now on, the newly selected ringtone will play instead of the standard ringtone. This is a great way of screening calls without even needing to take your phone out of your pocket or bag.

Adding New Ringtones

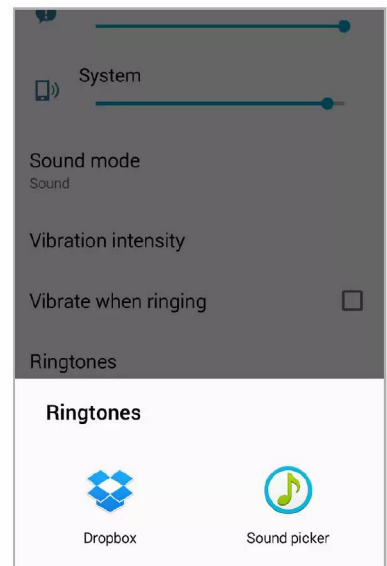
There is no reason why you need to stick with the standard ringtones which come with your device.



1 To transfer a ringtone from your computer, connect your phone to your computer using a USB cable. Your PC should automatically download the drivers you need. Mac users will need to download Android File Transfer.



2 In the window that pops up, you'll see the Ringtones folder. Copy your music file (mp3) into the Ringtones folder. Disconnect your phone from your computer. The music track should now display in the normal Ringtone selection menu.



3 Some devices offer a different method for adding MP3s as ringtones. You may see an Add button on the ringtones selection screen. Tapping this will allow you to choose any mp3 file currently on your phone as a ringtone.

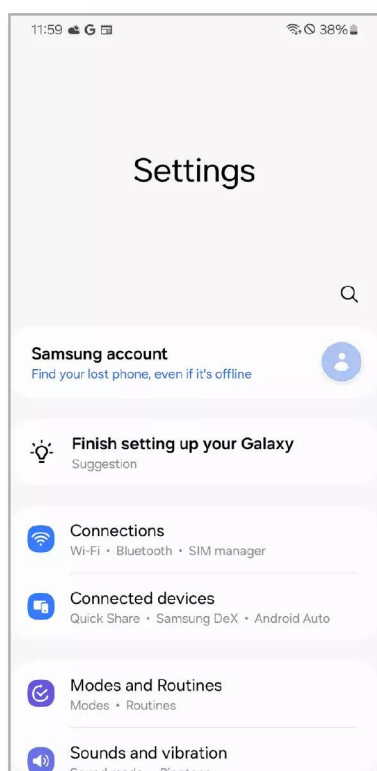


Personalising the Lock Screen

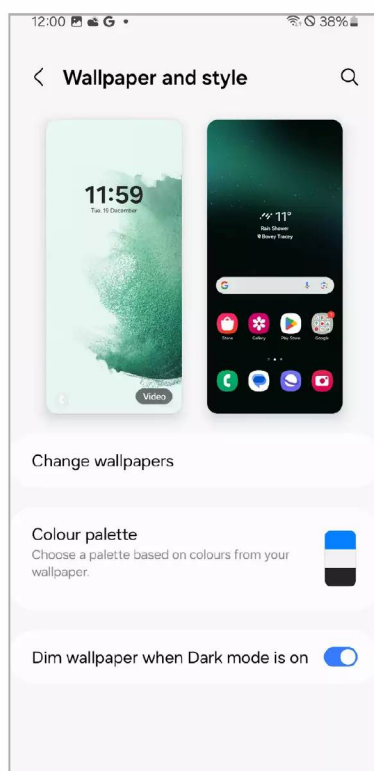
There's a lot you can do to customise and modify your Android device's Lock Screen, and we've had these options for far longer than Apple users. To really make your Lock Screen work for you, so it looks good and gives you the exact information you want in your Lock Screen widgets, follow this guide. You'll soon have your Lock Screen set up just the way you want it.

Improving the Lock Screen

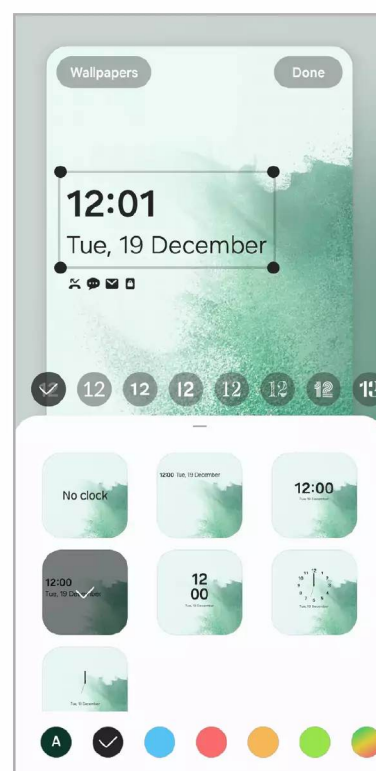
With the introduction of widgets and quick access short cuts, we actually spend far more time interacting with our device's lock screens than we actually realise. So let's make it the best it can be.



1 To follow this guide, you need to have Android 14 installed. If you haven't, check for updates on your phone. When it's installed, to begin with, open the Settings app from the Home Screen and go to the Wallpaper and Style option.



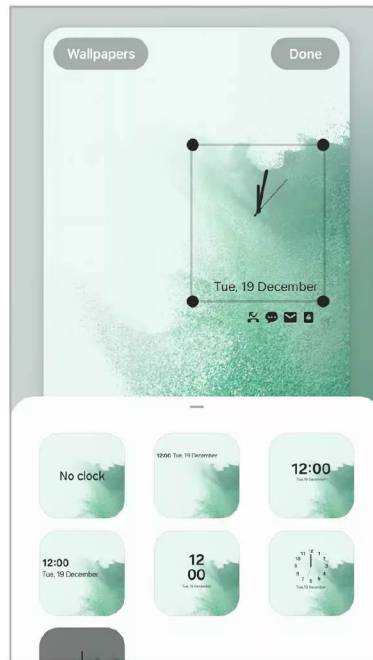
2 On the left of the screen you see a Lock Screen preview. Tap it to go to the Lock Screen Customisation View. You can change the appearance of the clock in the centre of the screen, including its style, shape and position on the screen.



3 Tap the Clock widget in the centre of the screen and you see a range of options for different styles and shapes of clock. Tap one to change the clock – you can select a regular digital clock showing the hour and minutes, or an analogue clock face.



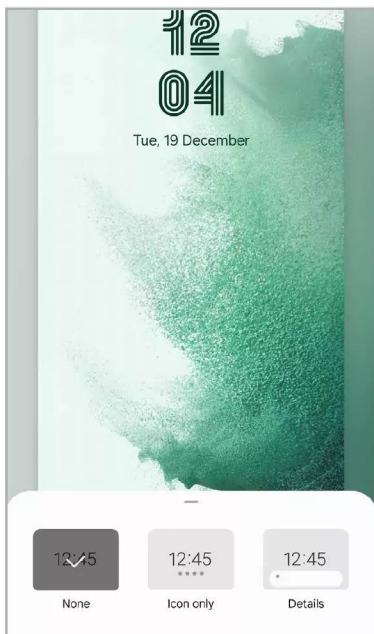
4 If you choose to use a digital clock, that is, one with digits instead of a clock face and hands, you can choose from nine fonts for the numbers. Do this by tapping one of the options above the clock window, as you can see here.



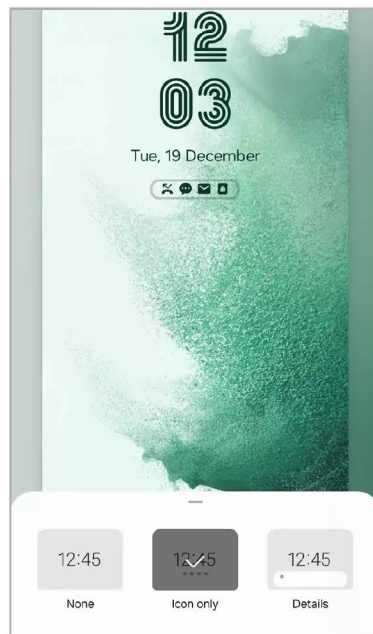
5 When you place a new clock, you see a shape with handles in the corners. You can drag and drop the clock to a new position on the screen, and also resize it by dragging one of the handles, that is, the dots in the corners of the frame.



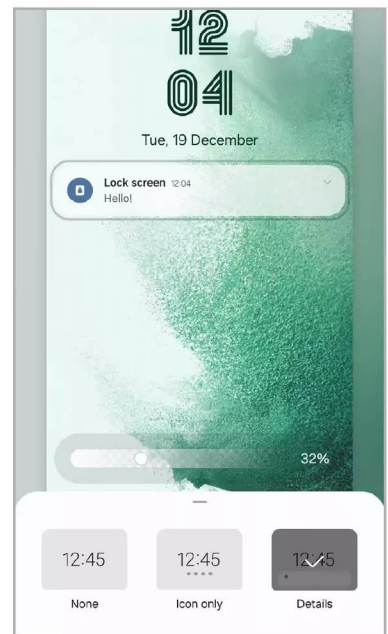
6 These colour options at the foot of the clock window let you choose the colour of the clock. By default a colour that complements your wallpaper is chosen, so you might not want to change it for something else, but the choice is yours.



7 One of the remaining options is choosing how to show notification indicators appear on your screen. If you don't want them to appear at all, choose the None option in the bottom left of the screen as shown.



8 If you want icons to appear under the time, showing the apps that have sent you notifications, choose the Icons Only option in the middle. You can see these icons in the screenshot above, underneath the clock display area itself.



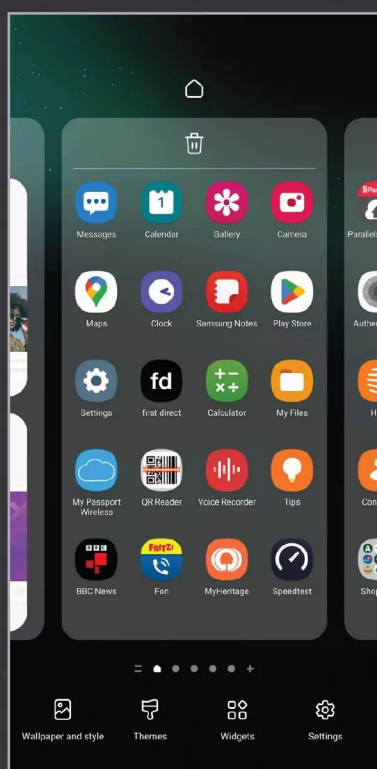
9 Finally, if you want to see the details of the incoming notifications, choose the Details option on the right. With this choice, you get a slider that sets how opaque the notification preview appears on your new and improved Lock Screen.

Personalising the Home Screen

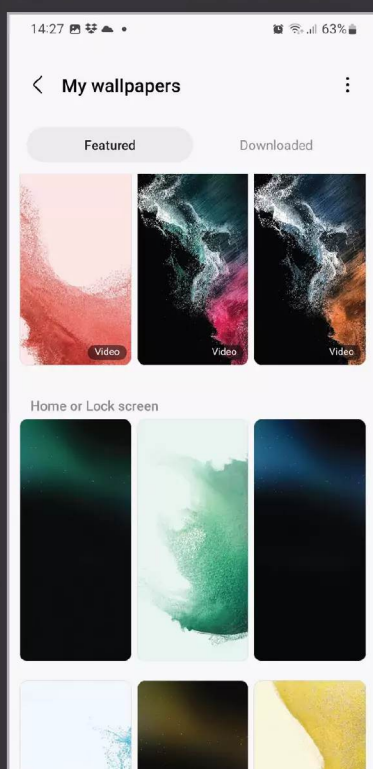
Changing the Home screen, whether that means a new wallpaper, moving icons into folders or choosing widgets, is one of the first things most new Android users want to do. The Home screen is an extremely flexible area, particularly on Android devices, and can be used to make your device much more usable, unique and personal to you. Here's how you go about it.

Changing the Wallpaper

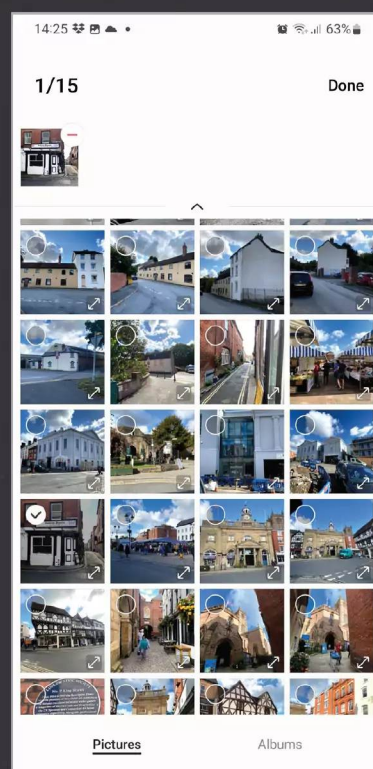
The exact steps for changing the wallpaper may vary between devices, depending on how new the device is, and which version of Android is currently being used.



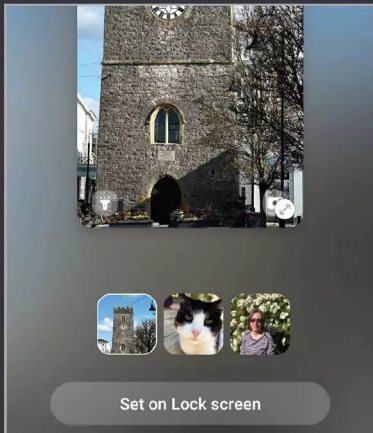
1 Tap and hold in any blank area on the Home screen until it shrinks and options appear. Exact options will vary but you will usually see Wallpapers, Widgets and Settings. Tap the Wallpapers option and the Wallpaper selection screen will show under the "My wallpapers" heading.



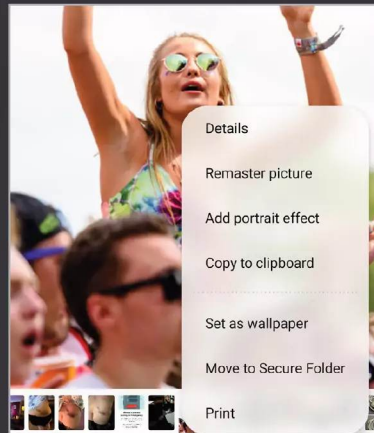
2 Tap the 'View all' or 'My wallpapers' option and then scroll through the wallpaper thumbnails to see all system wallpapers available on your device. If you like the look of one of them, tap on the thumbnail and then choose whether to apply it to Lock screen, Home screen or both.



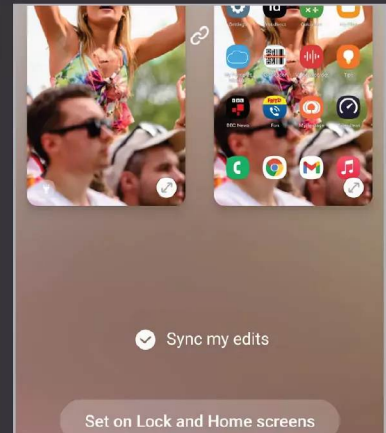
3 The wallpaper chooser also gives you the option to use an image from your Photo Gallery. Tap the Gallery option and a selection of recent images appear. Scroll up and down for more. These can be displayed from multiple locations, depending on what apps you have installed.



4 If none of the recent images shown appeal to you, tap the Albums tab and choose the album you want to browse. When you see an image or images you want to use, select them. When you're finished, tap Done and they're made available to add to your Lock/Home Screen.



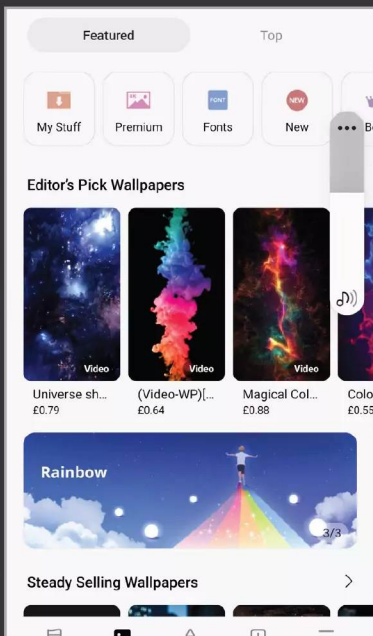
5 An alternative way to set an image as a Home screen wallpaper is to open the application where the image is located (the Gallery app for example), view the image and tap the Three-dots or Menu button. From the menu, select the Set As option and choose Wallpaper.



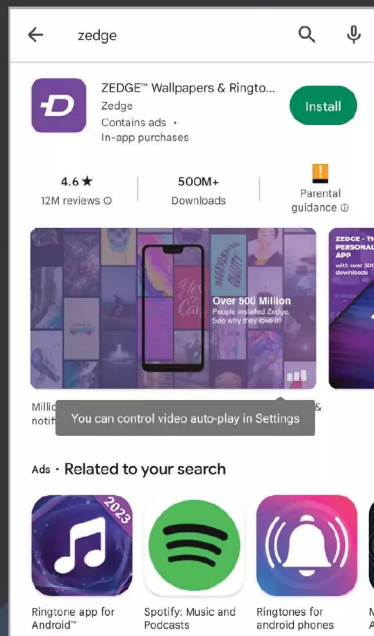
6 Once you have chosen an image and chosen where you want it displayed, you will see a preview of how it will look. You can then move the image around to better fit the frame. You can also choose to turn on the motion effect (if available on your device).

Finding New Wallpapers

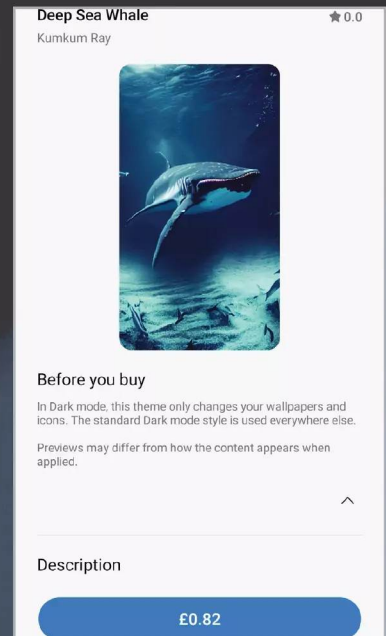
You can use almost any image as a wallpaper, but if you want a custom wallpaper, you must know where to look.



1 Android makes it easy to find new wallpapers by having its own wallpaper store. You can find this by tapping and holding on the Home screen, choose Wallpapers and then scroll down and tap Explore more wallpapers. Many of the wallpapers cost money, but some are free.



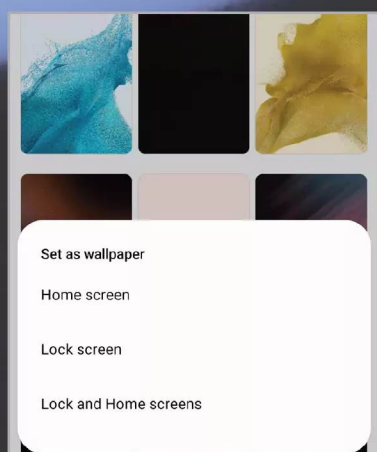
2 You can also find lots of wallpapers elsewhere. Open the Play Store app on your device and search for Zedge. There are a couple of different options, but the free wallpaper repository is the one with the purple logo. When the app is installed, tap to open it and start browsing.



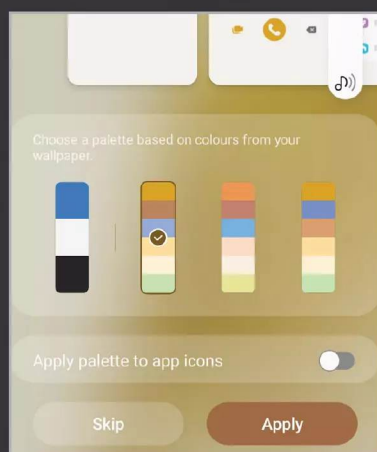
3 When you find a wallpaper you like, tap the thumbnail to view it on screen. Not all wallpapers will be suitable for your device, so use the preview to make sure before you download. Use the tabs to see details of the image. Tap Download to finish and the image is downloaded.

Wallpaper-based Dynamic Theming

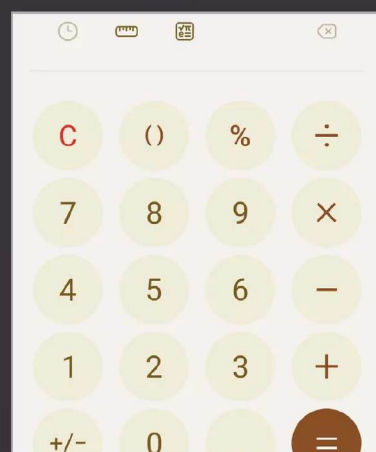
You can change the colour theme of your Android phone, based on your chosen wallpaper.



1 When you change your wallpaper, you can select a new theme, that is, a set of colours that are applied throughout your phone. This includes on menus, buttons, backgrounds and apps. First, choose a new wallpaper for your phone.



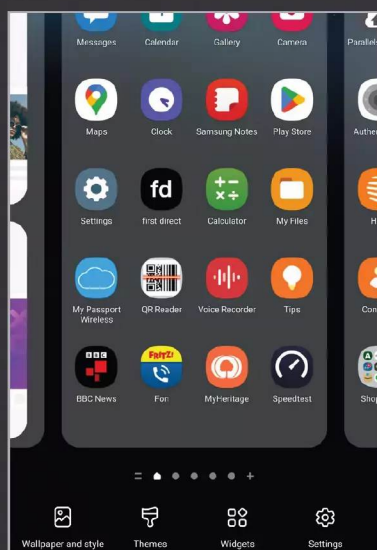
2 Having set it as your new wallpaper, you're invited to choose a colour palette for your phone based on the colours in the wallpaper. Pick one, and flick the switch if you also want the new palette to be applied to the phone's app icons.



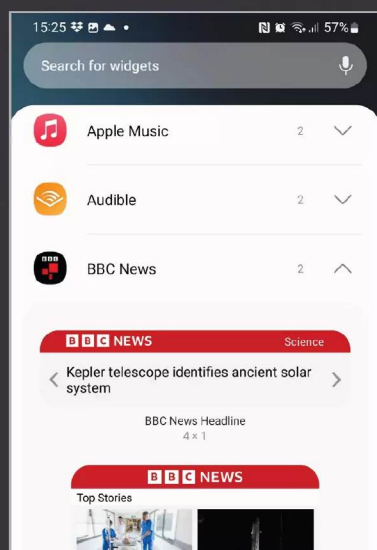
3 Tap the Apply button and the colour palette is applied to your phone. All sorts of things change their appearance. If you don't like it, go back to the 'Wallpaper and style' screen and tap 'Colour palette' to change it for something else.

Home Screen Widgets

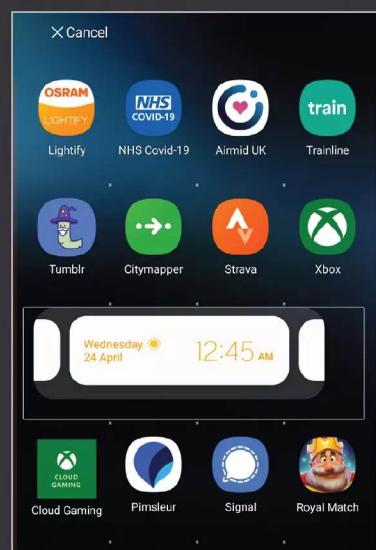
Widgets are an important and useful part of the Android OS, allowing you to access app info instantly.



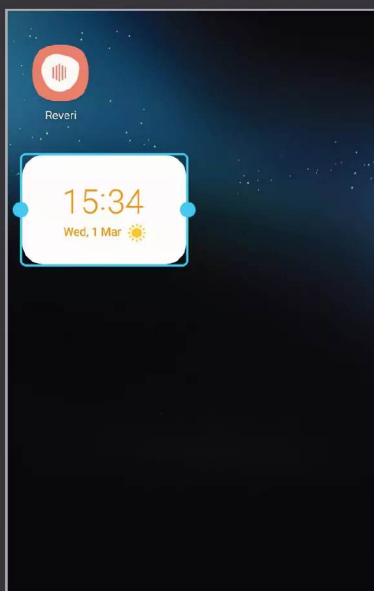
1 Your device may already have a few widgets placed on the Home screen when you first set it up. These can be removed or moved to suit your needs. See more on removing widgets further down the page. To begin adding new widgets, tap and hold on any blank area of the Home screen.



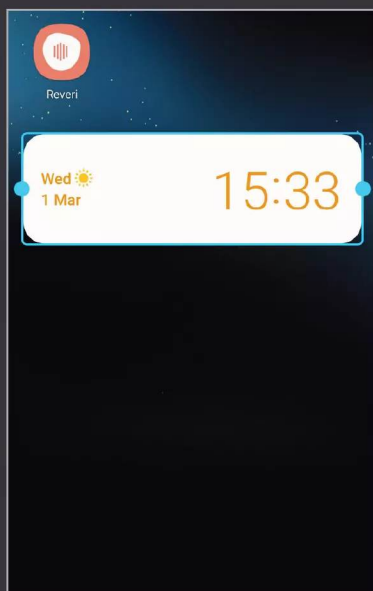
2 From the Menu, tap the Widgets option. You will now see a grid containing all available widgets currently installed. If there are different widgets available for the same app, different sizes for example, you can see the options available by tapping on the image in the grid.



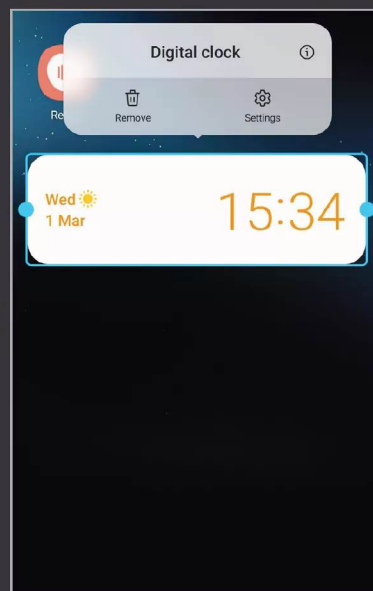
3 To add your chosen widget to the Home screen, tap and hold on the image in the grid until the view shifts back to the Home screen. Keeping your finger on the screen, you can drag the widget into position, even dragging it on to a new Home screen panel. Lift your finger to place the widget.



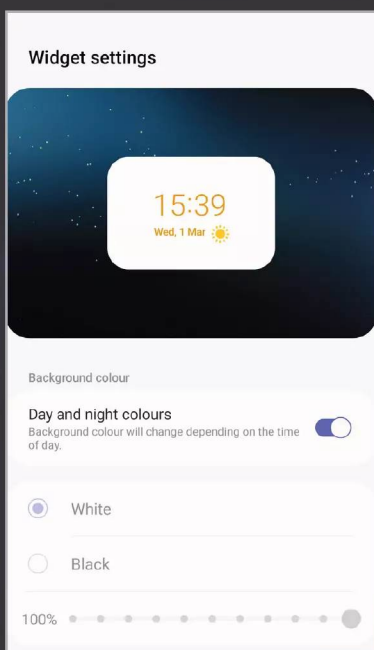
4 Some widgets can be made bigger or smaller to better fit your available Home screen space. To resize a widget, tap and hold on it for a couple of seconds and then let go. If the widget can be resized, an outline and tabs will appear around the edges. Drag these tabs to shrink or expand the size of that widget.



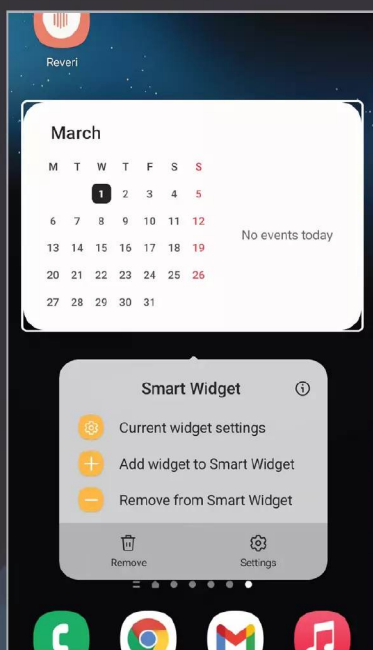
5 When made larger, some widgets will expand to display more information automatically. Some widgets will stay the same size but their active area, the one that opens the app when tapped, expands to cover more of the Home screen panel. Tap away from the widget to stop editing.



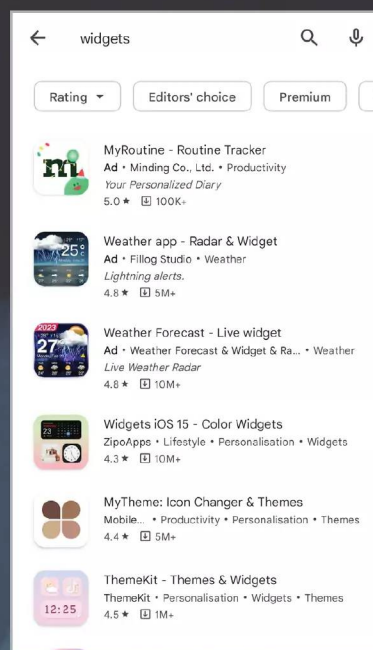
6 Removing widgets is easy and can be repeated as many times as needed. Removing a widget from the Home screen doesn't mean it has been removed from the device; it will be in the Widget menu if needed. Tap and hold a widget and then tap the Remove icon that appears in the Action menu.



7 Tap and hold a widget and tap the Settings option to customise that particular widget. What you can do depends on the widget in question, but here we can change the background colour, fade out the background area and more.



8 If you add a Smart Widget to the home screen, you can swipe it left and right to show different widget information. To edit a smart widget, tap and hold it and from the menu, select the Add to or Remove from option.



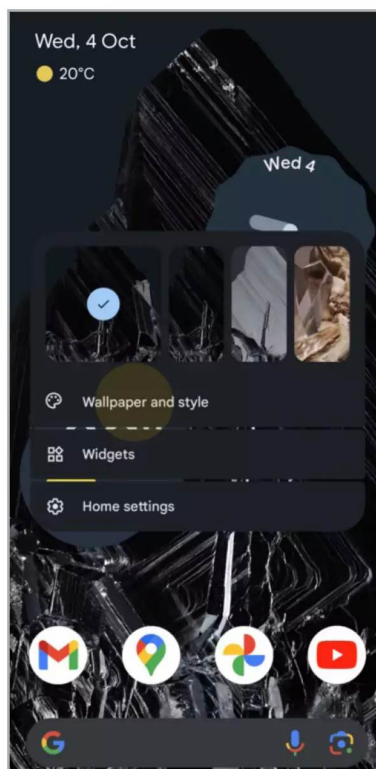
9 If you open the Google Play app and do a search for 'Widgets', you can find more widgets for your Home screen. Some are paid for, others are free. There's a lot of widgets out there, so browse them and find ones you like.

How to Generate AI Wallpapers

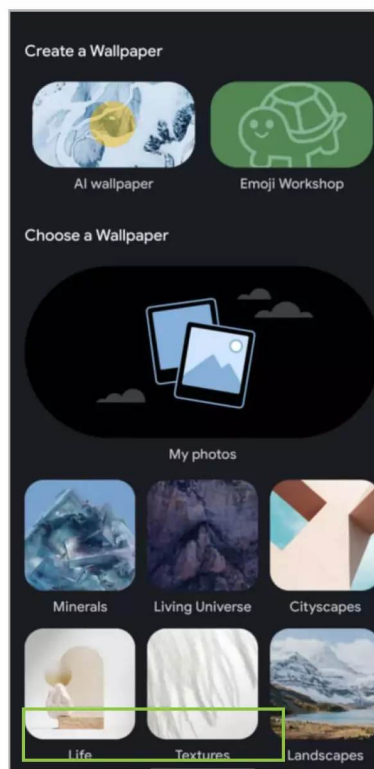
Artificial intelligence is technology's next great leap forward, and you can use it today to create stunning wallpapers for your Android 14 smartphone. At the time of writing it's only available on a Google Pixel 8 or Google Pixel 8 Pro running on Android 14, but eventually it will be available on any device running Android 14. Here's how it works.

Creating Your Own Wallpapers

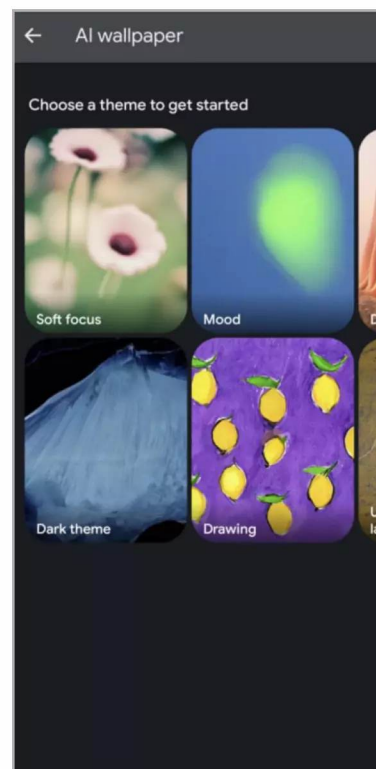
Using AI for creative purposes is something of a controversial subject. Although one could argue that using AI to generate art is the opposite of what art is, does this apply to your Android device's wallpaper?



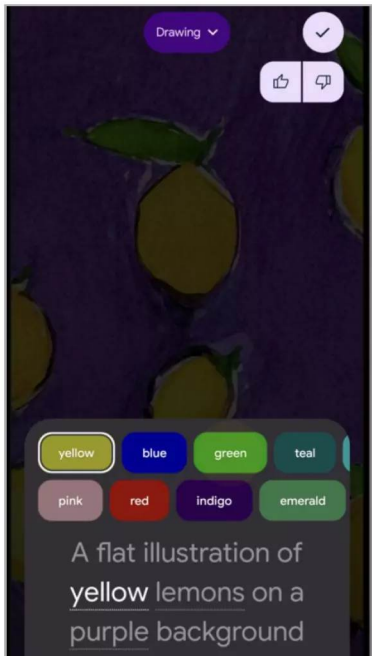
1 First of all, you must access your Wallpaper & Style settings. There are two ways to do this. You can either open the Settings app and look for it there, or you can tap and hold on your current Android wallpaper until this window pops up.



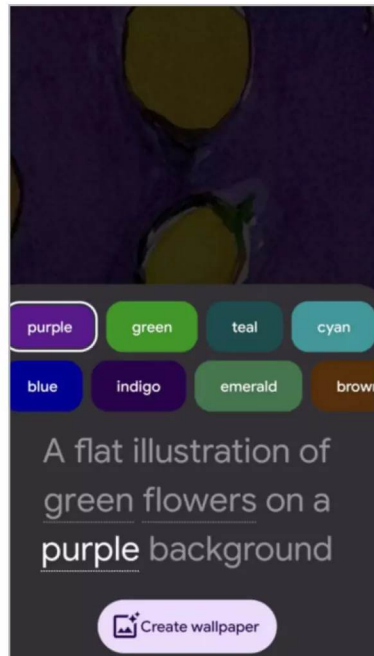
2 With the Wallpaper & Style settings open, tap the More Wallpapers option and then select the AI Wallpaper link. You can find it under the Create a Wallpaper option near the top of the screen. You can see it in this screenshot in the top-left corner.



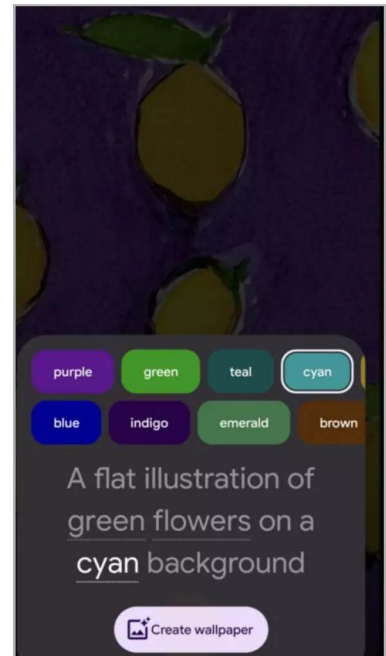
3 Before you ask your device's AI to construct a new wallpaper, you have to pick a theme. These themes can be things like soft focus, dark theme, drawing, mood and more. Slide them to the left for more options, and choose one.



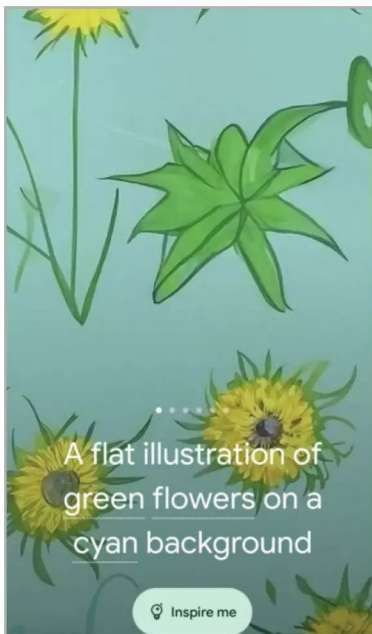
4 If you want to change your theme after you've started, tap the button at the top of the screen which displays your currently selected theme. You get a menu in which you can change it to another option. Experiment, and have fun.



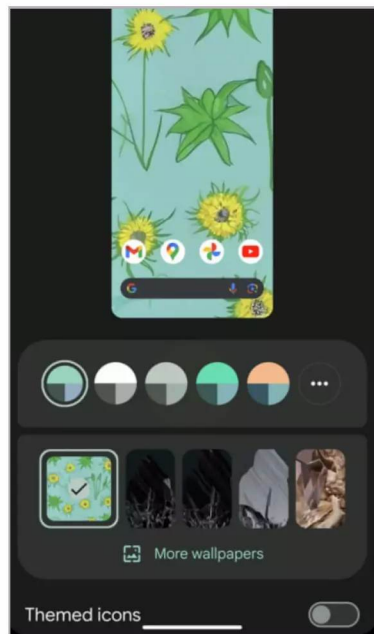
5 You're offered a bank of words you can use to create your AI wallpaper. Look out for items such as 'Lemon', 'Flower' or 'Spaceship', and colours as you can see here, that let you change the colour scheme. Tap the buttons to use the words.



6 Now's the time you've been waiting for. It's time to create the AI-driven wallpaper! At the bottom of the screen there's a button titled (appropriately enough) 'Create Wallpaper'. It's now you get to press it and start the process.



7 After a few seconds, the AI presents you with options, which are dependent on the theme and keywords you chose earlier. Check them out and choose one you like. Tap the checkmark on the top right to automatically make it your wallpaper.



8 Your phone's colour scheme automatically adjusts to match your new wallpaper. Of course, if you want to tweak things, you can go into Settings > Wallpaper and Style and customise your phone's appearance to suit your wishes.



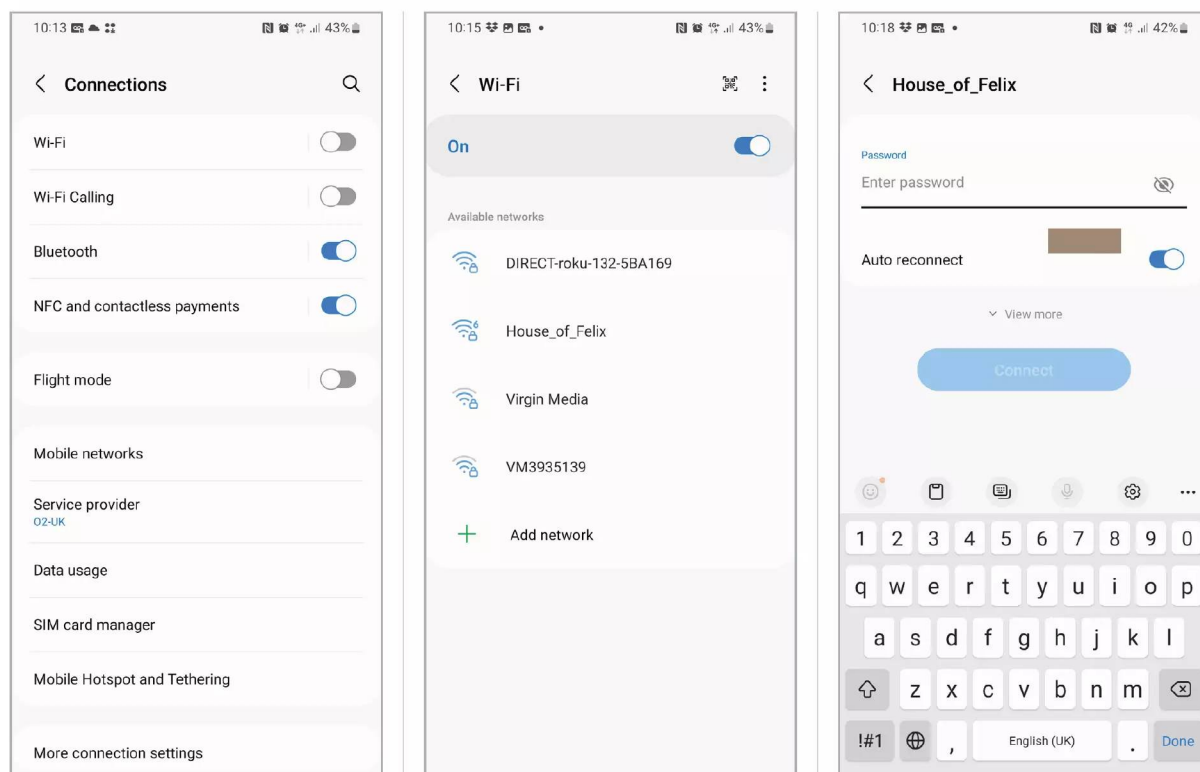
9 There is also an option in the AI Wallpaper Creator called 'Inspire Me'. Look for the button at the foot of the screen. If you choose this option, the wallpaper generator makes you an AI wallpaper at random, using completely random elements.

Connecting to Your Wi-Fi

A large amount of the content you will want to access on your Android device will require a flexible and fast Internet connection, which usually means a Wi-Fi connection. Here you will learn how to use your device's wireless networking capabilities to activate Wi-Fi and connect to any wireless local area network (WLAN) to which you have access.

Connecting to a Network

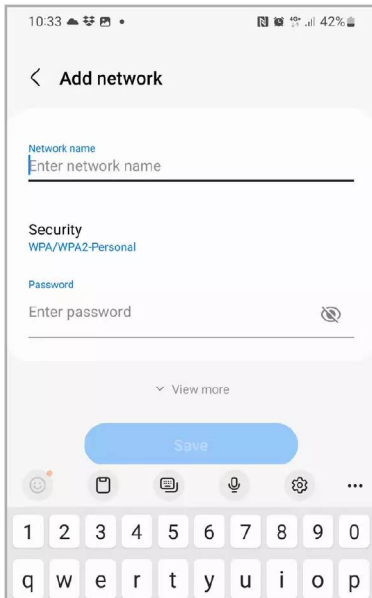
Before trying to connect to a Wi-Fi network, you should make sure you know the SSID (its name) of the network you want to connect to, as well as the password needed. These should be supplied with your router.



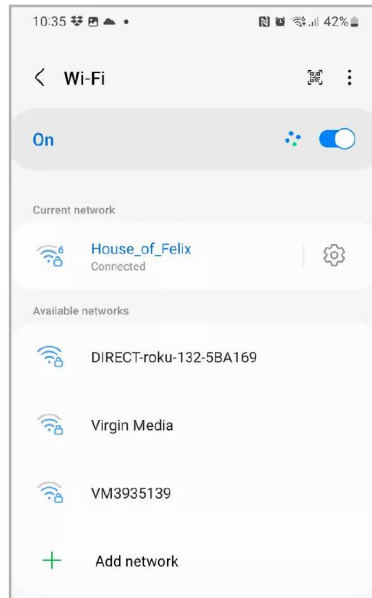
1 Open the Settings app and look for the Wi-Fi heading. It's probably under 'Connections'. First of all, you must turn your Wi-Fi connectivity on. Drag the slider to the right, then tap Wi-Fi. Your device begins to scan for and displays any networks within range, in a list.

2 Next to each available network, you will see an indication of signal strength and whether the network is secured. Hopefully you will see your Wi-Fi network in the list. If not, make sure that the Wi-Fi router is working and then tap Scan or pull the screen down to try again.

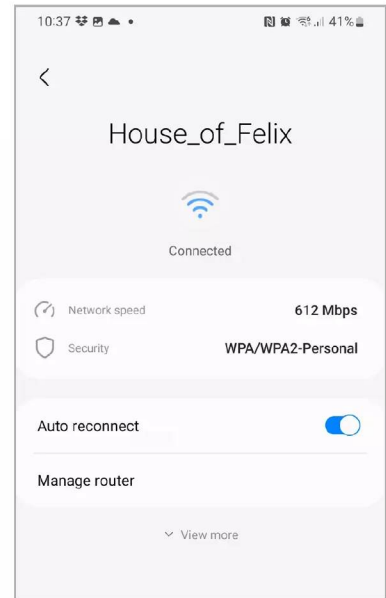
3 When the name of your network is shown, tap it and you will be prompted to enter your Wi-Fi password (your Wi-Fi password is provided by your service provider). If you don't know your current one, try looking for an information sticker on your router hardware.



4 If you can't see your network in the list of networks, tap More > Add Wi-Fi network. You will then need to type in your Network SSID (the name of the Wi-Fi network you want to connect to) and select the security type (normally WEP or WPA).



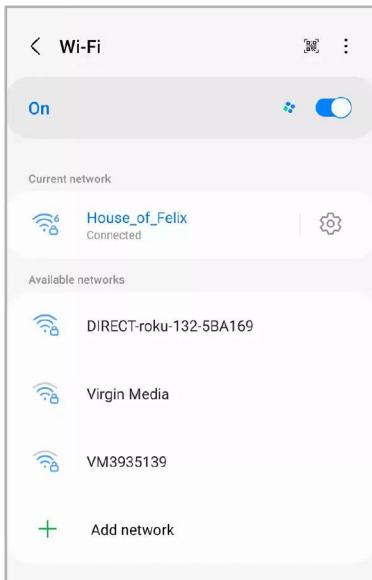
5 Following either of these connection methods, your phone or tablet should now connect to the Wi-Fi network. The Wi-Fi icon will now appear in the top status bar and when you next turn Wi-Fi on, it will automatically choose this network, if in range.



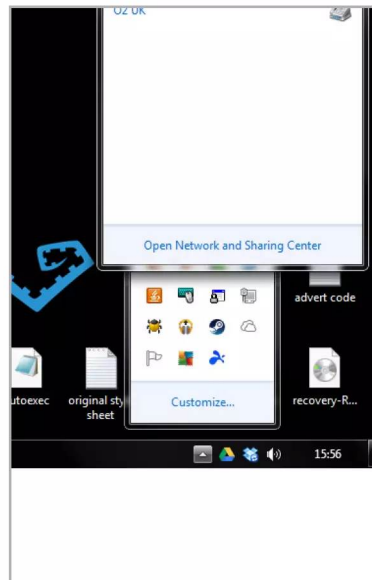
6 To forget a network, go to the networks list and tap the Settings icon next to the SSID. The next screen should offer a 'Forget' option, maybe illustrated by a bin. Other Android phones might have you tap the SSID and choose Forget from a menu.

Using Wi-Fi Direct

Wi-Fi Direct is a way for users to transfer data to and connect to devices on the same Wi-Fi network.



1 Open Settings > Connections > Wi-Fi and wait for nearby devices to be shown. Look for something prefixed with 'DIRECT'. Both devices need to be connected to the same Wi-Fi network. Select a device and when its owner accepts the connection, the devices are connected.



2 To receive data via Wi-Fi Direct, you just need to accept the transfer request. When you receive data, it is saved to your device automatically. Received files are normally saved to the My Files. You can also search for files in the Finder search, in the app drawer, if you can't find them.



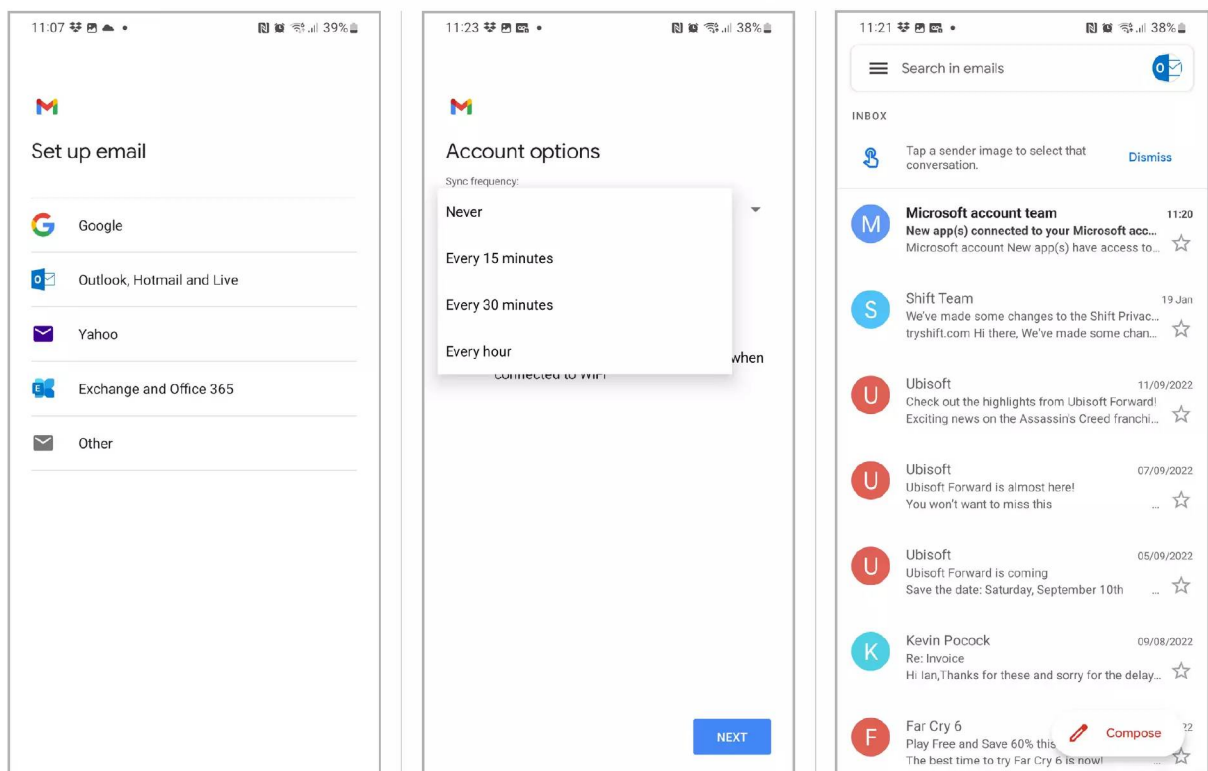
3 To send a file to a device with which you are currently connected, simply open the image in the Gallery app and tap the Share button. From the Share menu, you will be able to select Wi-Fi Direct and then choose the correct device to send to from the list of available devices.

Setting Up and Sending Emails

Being able to sync your Gmail account easily to your Android device is great, but there are sure to be lots of users who use different email accounts. Setting up your phone to pull emails from these POP3 or IMAP accounts is relatively easy, but you will need your username and password details and possibly the names of your incoming and outgoing mail servers.

Automatic Email Setup

For most users, the automatic email setup wizard will take any hard work out of configuring your email app and should be able to find the relevant email server details from the email address you provide.



1 Open the Gmail app from the Apps menu on your phone and choose 'Add email address' then the type of email you're setting up to start the setup process. Enter your email address, along with the password. Tap Next and wait to see if the Email app can pull the email settings from your ISP automatically.

2 Once the automatic setup is complete, you can choose if and when the app checks for new emails. You can set a higher frequency for peak times and a lower frequency for off-peak times. If happy with the default settings, you can just leave this for now. You can always change these settings later.

3 Your emails should now begin to load on to your device from your mail server. This can take a while, depending on both how many emails you have on the server and which type of email account has been set up by default (POP3 or IMAP). You can simply repeat the process to add more email accounts.



Manual Email Setup

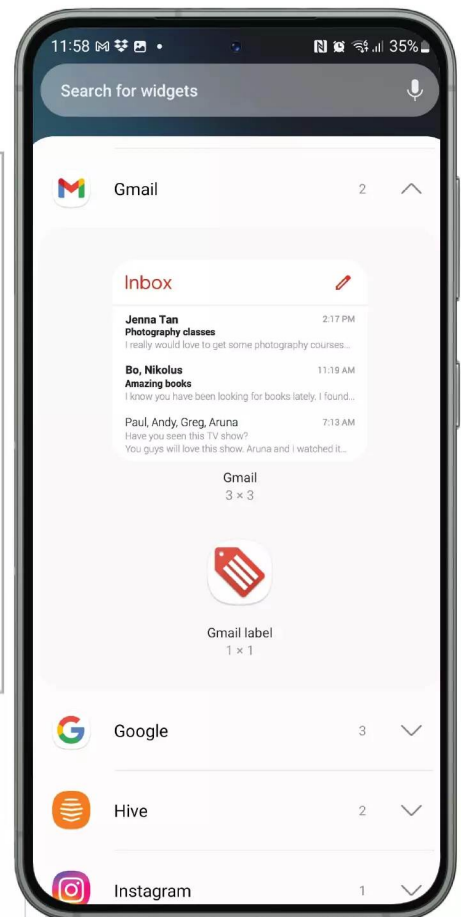
In some cases, the automatic email setup will fail and you will have to set up manually. If you have set up email accounts before, this should be fairly familiar to you. If not don't worry, it isn't too difficult.

1 Open Gmail, tap 'Add another email address' then choose the email service you want to add (if it's not listed, tap 'Other'). Enter your details and tap Manual Setup. You need the email server details (from your ISP or their website). Choose the type of email you use (POP3, IMAP or Exchange).

2 IMAP is generally better, as this type of account keeps the message on the server after reading on your phone; useful if you access emails in multiple places. Tap Next and the server settings should be pre-filled for most of the major ISPs, but if not, fill them out with the information you have.

3 Tap Next and let the email client attempt to automatically configure the incoming server settings. Repeat for the outgoing server. If the manual setup fails, you may need to change the security type to SSL/TLS. The port for incoming emails is usually 993 and usually 465 or 587 for outgoing emails.

4 If you're still having problems, double-check email server settings with your ISP or email provider. On the next screen, or later in Settings > Accounts and backup > Manage accounts, you can change some of the account settings. These include the frequency at which the app checks for new emails.



Email Widget

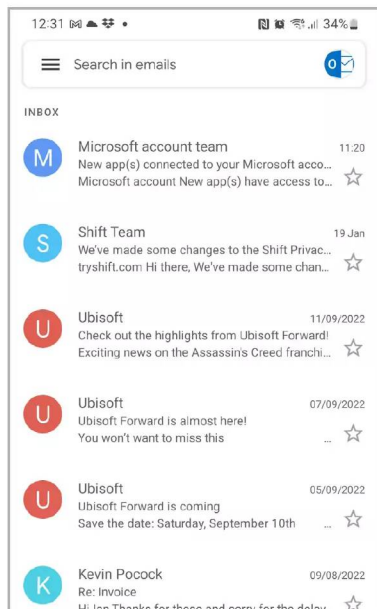
> If you want to add the Gmail widget to your Home screen, open the Home screen and tap and hold any empty part of the screen. A row of icons appears at the foot of the screen. Tap Widgets, scroll down to Gmail and tap the chevron to its right. You see two options.

The larger of the two widgets available for Gmail allows you to have your email inbox (or another box of your choice) appear in the widget, so you can see arriving emails on your Home screen. This widget is resizeable, so you can make it smaller or larger by tapping and holding, then dragging the handles.

The second widget is the same size as an app icon. Use it to get directly to an inbox or other folder in an email account of your choice. You can rename that mailbox on the widget without effecting the mail account itself.

Sending Emails

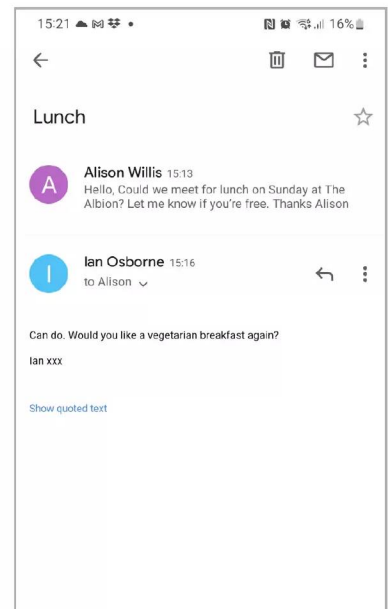
If you are not familiar with using your phone to send and receive email, getting started can seem a bit of a chore. By following this essential guide, you will learn how to compose, send and receive your emails anywhere.



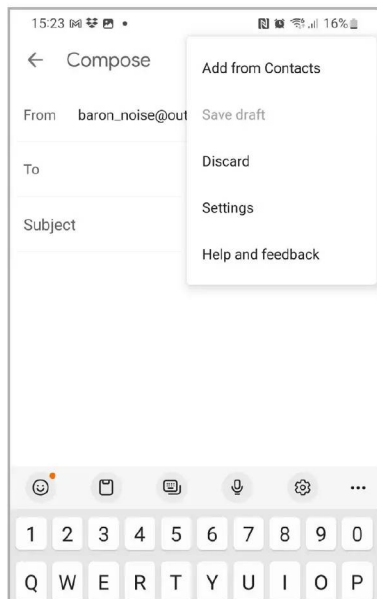
1 Open the Gmail app from either the shortcut on the Home screen or by browsing the main apps list. You can also start a new email or reply to a recent email by tapping the email widget, if you have one set up on your Home screen.



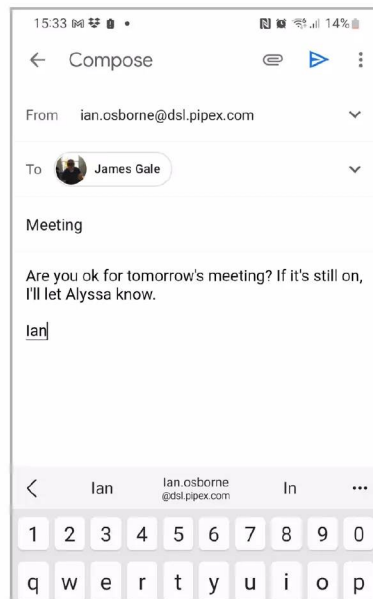
2 If you want to compose a new email, tap the Compose button at the foot of the screen. If you want to reply to an email you have received, simply select the email in the list and then tap the Reply button (the curved arrow).



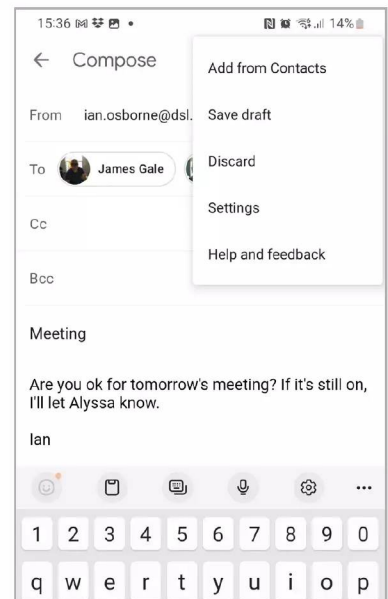
3 Received emails always show with the most recent at the top of the inbox. If you have had more than one email in a conversation, you can open it and read all associated emails on one screen before replying.



4 If composing a new email, tap the three-dots icon and choose 'Add from Contacts' to find a contact in your main list. Or enter the email address manually into the To box if you're emailing someone not in your contacts. You can add more than one recipient.



5 Add a subject, then tap the Main Message box and start to type your email message. When you're typing, the predictive text works equally well in emails as elsewhere and you can add special characters such as emoji to your emails.

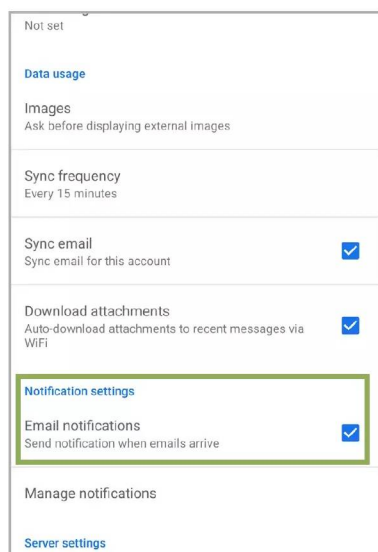


6 When you have finished composing your email, tap the Send button at the top of the screen (usually a paper dart icon). You can also tap the Menu button and choose to Save as Draft, if you don't want to send the message straight away.



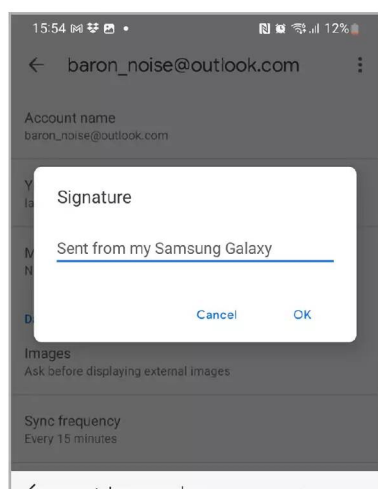
Email Settings

You can change some of the default settings to suit your particular needs for that account.



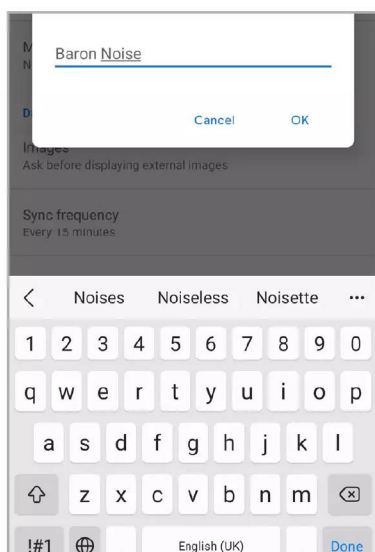
Notifications

➤ In the email app, tap the three-lines icon (top left) and choose Settings from the sidebar. If necessary, tap the account you want to modify. On the next screen configure how you're notified of new emails. If you turn notifications on, a New Mail icon appears in your notifications bar.



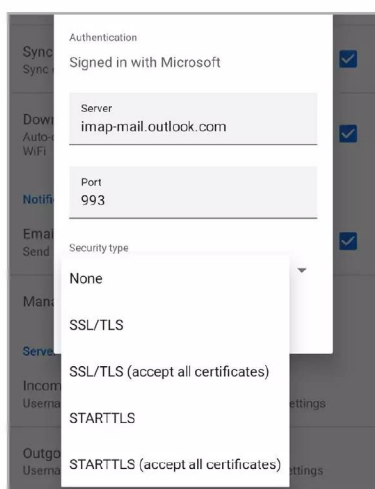
Email Signature

➤ When you compose a new email, you should see some text already in the message box. This will be something like 'Sent from My Mobile' or my Branded device and is your default signature. This is automatically added to emails but can be removed or changed if you tap Signature.



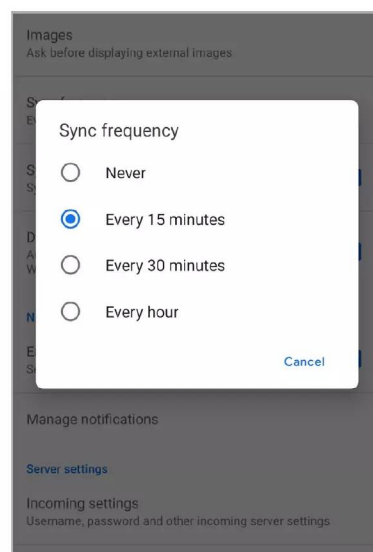
Your Name

➤ To change the name linked with outgoing emails on the account you're editing, tap your name in the settings. A window opens, in which you can edit your current name, changing it to whatever you like. When someone gets an email from you, it's listed as coming from this name.



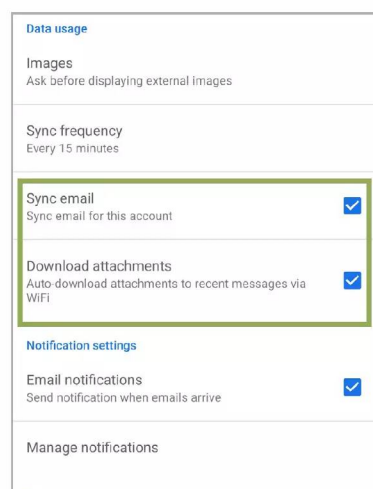
Server Settings

➤ Tap the Server settings option for the incoming or outgoing server and you see the advanced settings used when sending or receiving email. Leave these alone unless you're having problems with your email account. Correct settings are available from your ISP or email service.



Sync Frequency

➤ How often do you want your email app contact your server and download new emails? Tap the Sync Frequency option and you can choose between Never, Every 15 minutes, Every 30 minutes or Every hour. If you choose 'Never', you can only download emails manually.



Sync Email/DL Attachments

➤ The next to options are checkboxes. The Sync Email checkbox turns off the syncing of that account with the email server. The Download Attachments checkbox sets whether email attachments are downloaded automatically, or only manually when on Wi-Fi.

Browse the Internet with Chrome

The mobile version of Google Chrome is now the standard browser on most Android smartphones and tablets and is widely considered to be the fastest and safest browser around. The app will be preinstalled on your Android device but you should check for the latest updates on Google Play before you use the browser on your device. Android device devices may also have a second web browser app that is called simply Internet.

Browsing the Internet

The Google Chrome browser is far from the only option for getting onto the Internet but unless you need very specific features offered by other browsers, Chrome is a great all round choice. Here's how to use it.

1 Search Field

➤ Type your search terms or URL here. You will also see a microphone icon, which when tapped will allow you to search by voice.

2 Chrome Menu

➤ The Menu button should always be visible and gives you access to the bookmarking button, page refresh and the forward and back buttons.

3 Bookmarks List

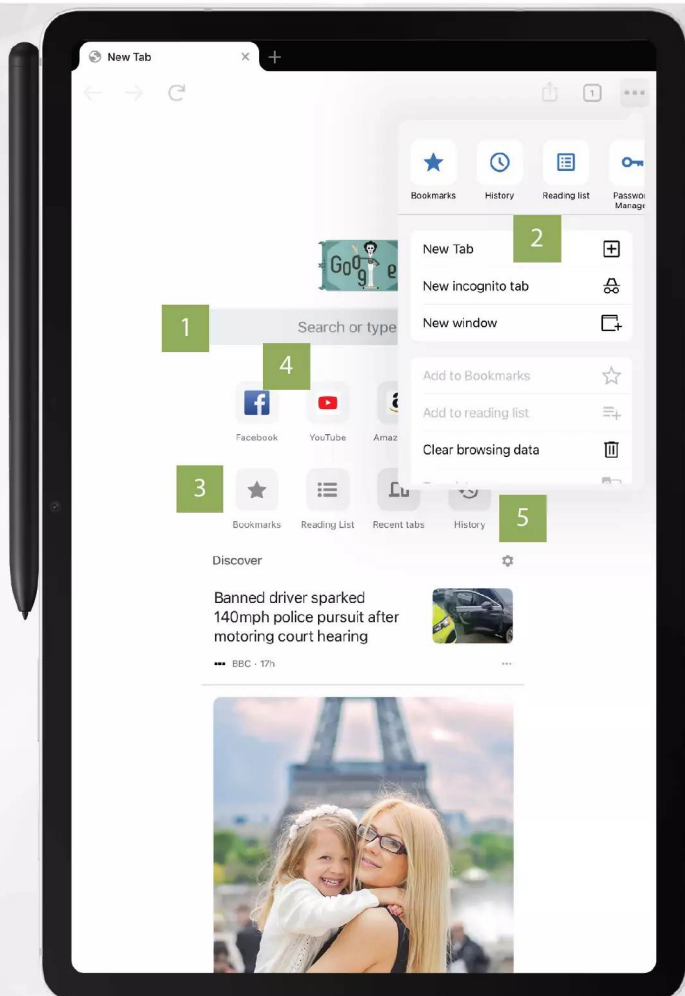
➤ Tap the star at the bottom of the Chrome Home screen to see your bookmarked websites. You can also access bookmarks through the menu.

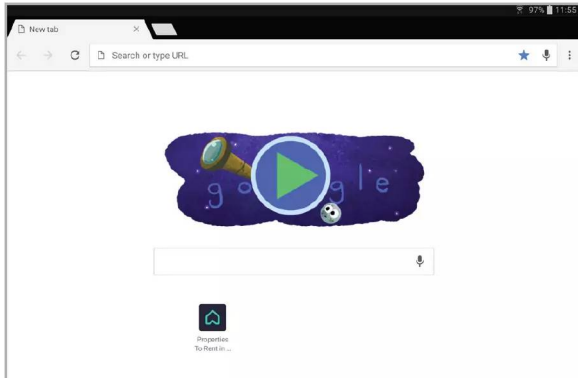
4 Recent Sites

➤ Recently visited websites will be displayed as thumbnails on the opening screen of Chrome. Tap any to open that website.

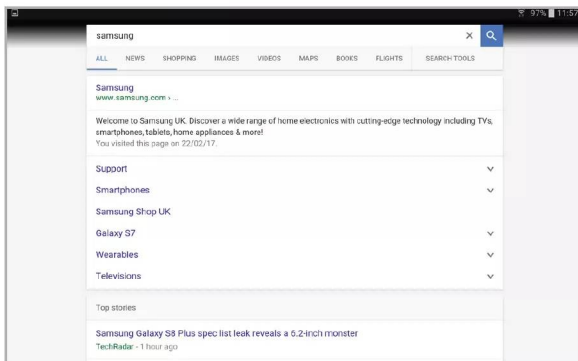
5 History

➤ For a full browsing history tap the clock icon. The browsing history from your other devices will also be shown if they use the same Google account.

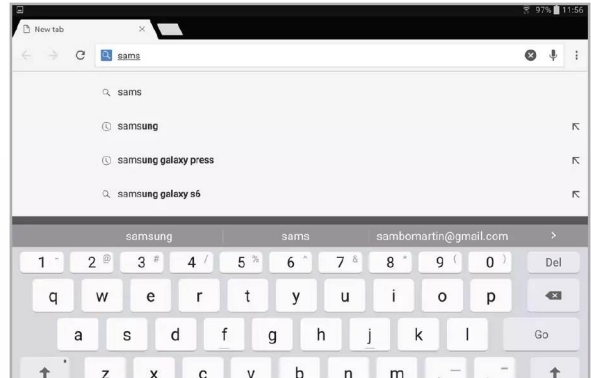




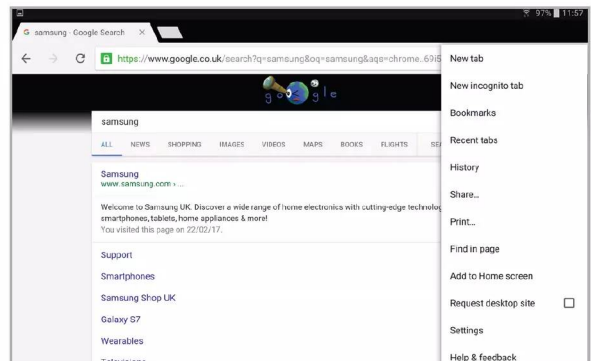
1 Tap the Chrome icon to open the app. The familiar Google search screen should open first, with recently opened or frequently opened websites as thumbnails below. If you're using the app for the first time the screen will be blank. To start searching for websites, type in the search field.



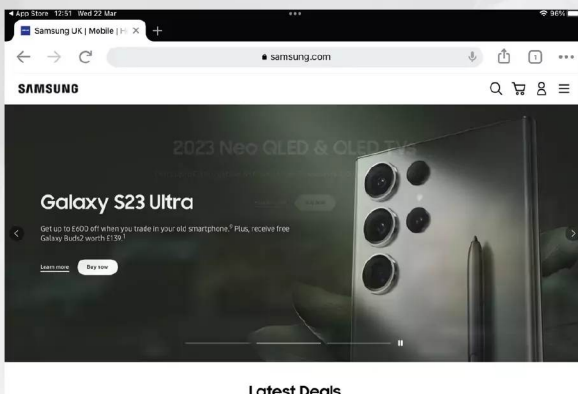
3 By default Chrome will use Google as the search engine, so results for your search query will be displayed in a familiar Google format, albeit slightly adapted for small screens. If you don't want to use Google, you can change the default search engine in the settings. Tap Menu > Settings > Search Engine.



2 You can either type a search term or a URL if you know the address of the website you want to visit. As you type Chrome will offer suggestions based on the words entered. Tap any of these to enter the word as your search term. If Location Services are active, local results will be shown.

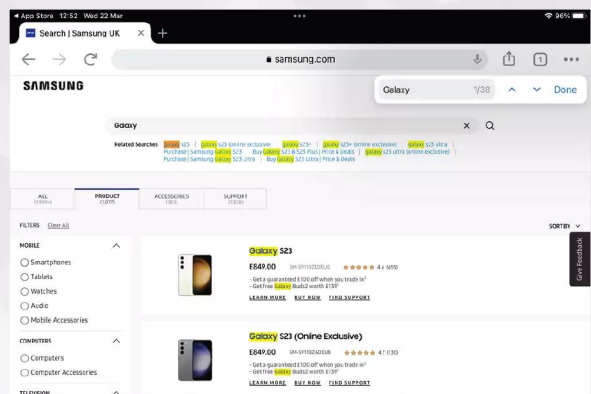


4 To begin a new search and view another website whilst keeping the first one open, you can create a new tab. On larger tablet screens tap the New Tab button at the top; you can also tap Menu > New Tab. You can then do a new search. If not browsing on a tablet you switch tabs by tapping the Overview button.



Request Desktop Site

➤ Chrome will automatically detect if a website has a mobile version and display the version appropriate to your device. If you prefer to view the original version of a website, you can force Chrome to do so. Open the site tap the Menu button and check the box next to Request Desktop Site.



Find in Page

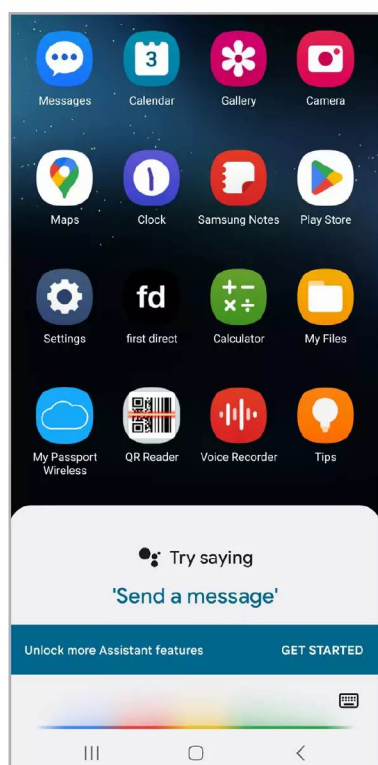
➤ This feature, accessed through the Chrome menu, allows you to search an individual open web page for specific words or phrases. Tap Menu > Find in Page and then type the word in the search field that opens. The number of times the word appears is displayed and the arrows let you switch between instances.

Getting the Most From Google Assistant

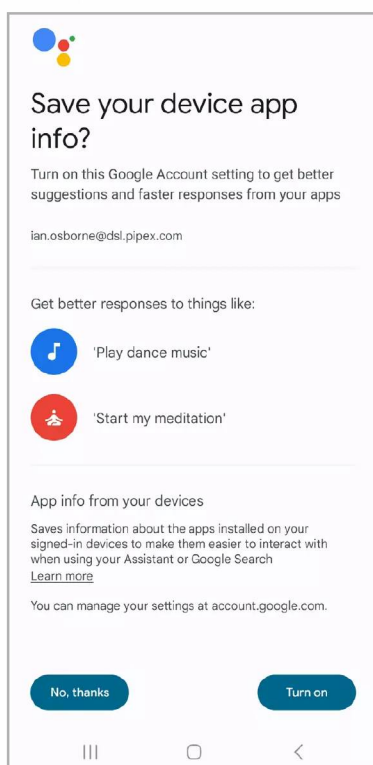
Google Assistant is part of the company's push to take on Amazon's Alexa, Apple's Siri and Microsoft's Cortana personal assistants, and has been slowly evolving over the last few years. As the name suggests, Google Assistant can help out in your everyday life, and become available in even more ways if you invest in one of the many household devices compatible with the Google Home service. So let's take a look at how you can use the assistant on your Android device.

Set Up Google Assistant

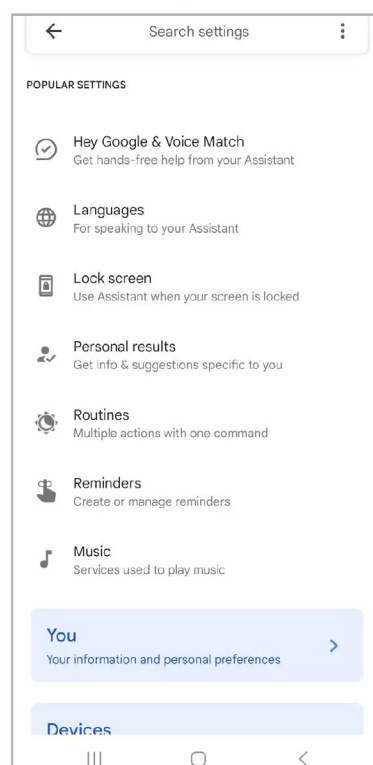
The Google Assistant is really rather clever, and it makes sense to take advantage of it. After all, its complete design is entirely based on making your life easier, so why not let it? Here's how to get started with your Google Assistant.



1 You can access Google Assistant at any time, by pressing and holding the Home button. This opens a small panel at the bottom of the screen, with the assistant immediately ready to listen to voice commands, or react to typed searches or queries. You can even take photos for Google to identify.



2 When you open Google Assistant for the first time, you will see a link to "Unlock more Assistant features". This allows you to turn on screen context, which changes what the assistant does depending what is on screen when it is opened. You can also set this in the assistant settings.

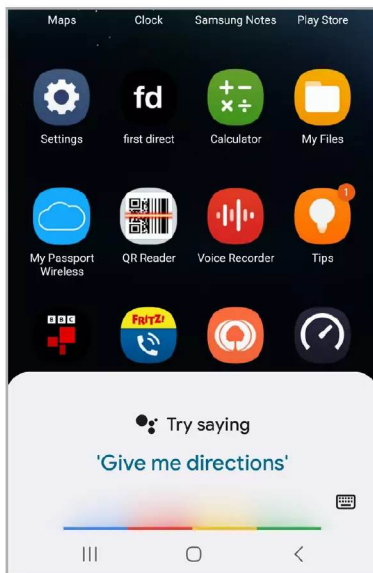


3 To open the settings, open Google Assistant and swipe up to make it full screen. Then tap your profile picture at the top of the panel. Here you can set privacy controls, add your name, address, and other personal details, change the language of the assistant, and teach Google to recognise your voice.

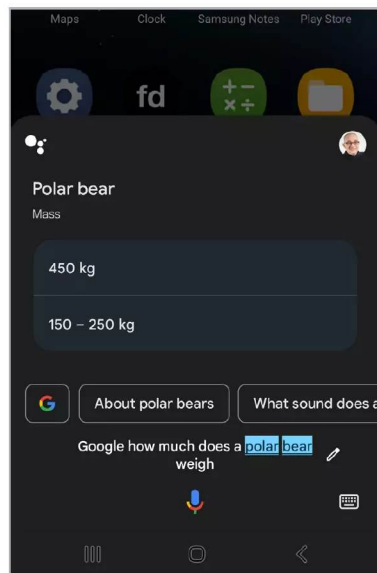


Using Google Assistant

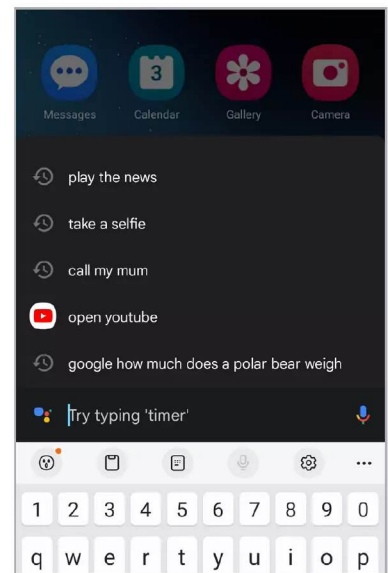
Now you have Google Assistant set up, and have added the information you want it to have, you can start using it.



1 Open Google Assistant by pressing and holding the Home button. Each time the assistant opens, it displays an example task. You can activate this task by tapping it or speaking a command, as appropriate. These examples offer a good way of learning what the assistant can do.



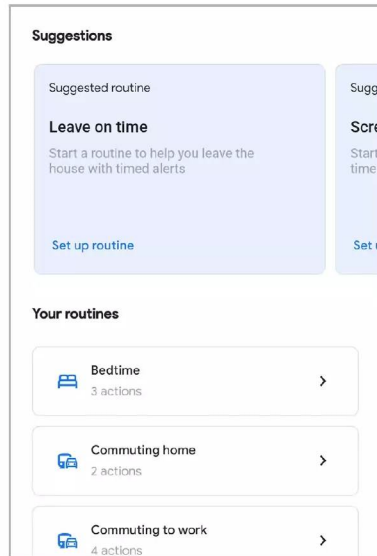
2 When the Voice command mic is open and listening, you will see four coloured lines at the bottom of the panel. You can then give a voice command, such as "Google, open the Messages app" or ask Google to search for something online, e.g. "Google how much does a polar bear weigh?"



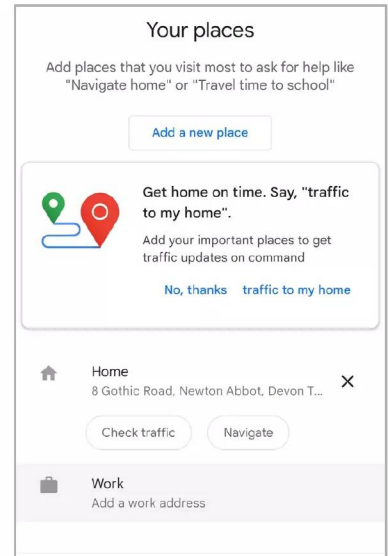
3 If you want to type an instruction instead of speaking it, tap the keyboard icon found in the Google Assistant panel. If you change your mind and want to speak an instruction after all, tap the mic icon in the text field. This takes you back to the screen where you speak to the assistant.



4 The camera in Google Assistant is quite clever. It can scan text and look up specific terms or words, identify and compare the price of a product you photograph, help you explore an area by showing places of interest, and more. Take a selfie for a countdown timer and a front-camera snap.



5 If you have a Google Home speaker, and have set up Routines, you can access them from Google Assistant. Just open the assistant and type or say the routine name (e.g. "Good Morning"). You can set up Routines even if you don't have a Home speaker. Open Google Assistant, say 'Google Assistant settings' and tap Routines.



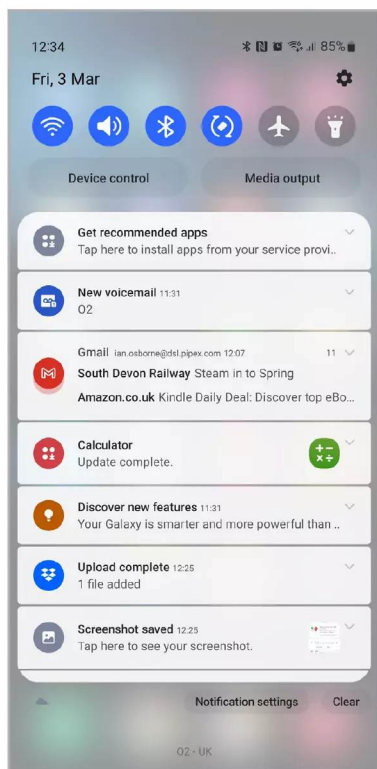
6 The more you use the Google Assistant, the better it will get at recommending tasks and commands. And the more information you feed into it, the more useful it will become. If you have added your home or work addresses, for example, you can just say, "Show me the best route home/to work".

Managing Your Notifications

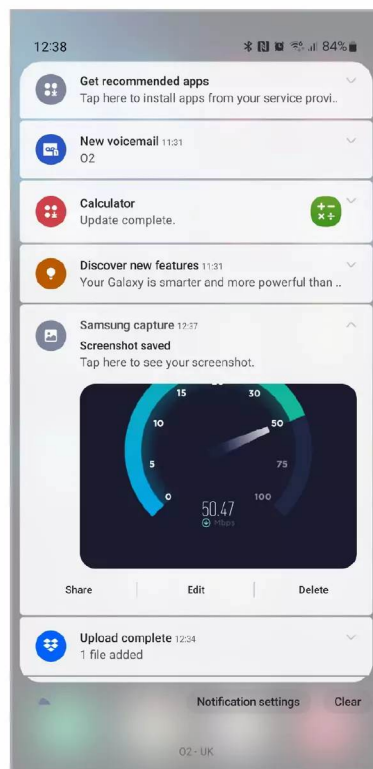
Notifications are used by your phone, or tablet, to alert you when new things happen on your device, from a new email arriving to the latest breaking news story from your favourite news app. You have a high level of control over your notifications, but if you don't know how to properly manage them, they can become annoying and sometimes intrusive. Let's take a look at how to organise your notifications so they work for you, not against you.

Notification Panel

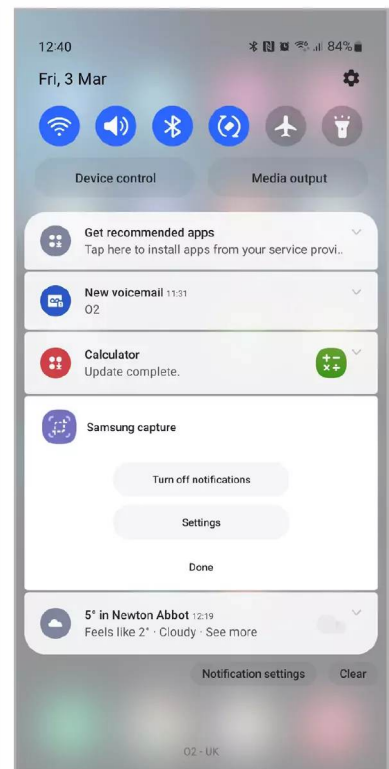
The Notification panel is the quick way to view and interact with alerts on Android. If you learn how to use this properly, you might never need to view notification settings. Here's how to go about using your Notifications panel.



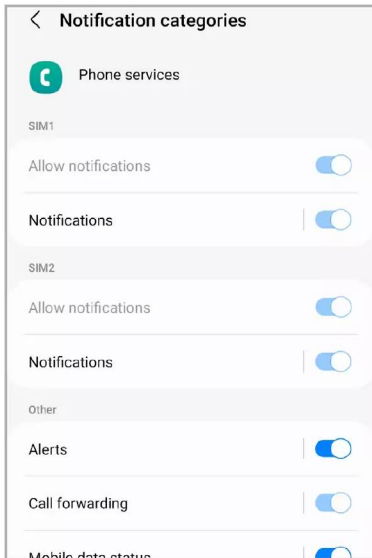
1 Notifications will appear as small icons in the status bar at the top of the screen. To open the Notification panel, drag your finger down over the status bar. They are grouped together so, for example, if you have several Gmail messages, they will be displayed in a single list.



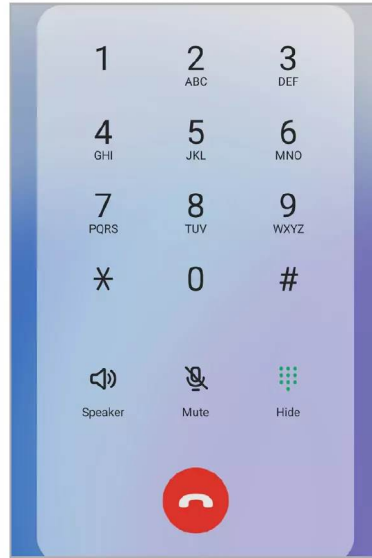
2 Notifications are usually displayed with a small amount of information in the panel. However, you can expand most of these by dragging your finger down the notification group. This will allow you to see more information while staying within the Notification panel.



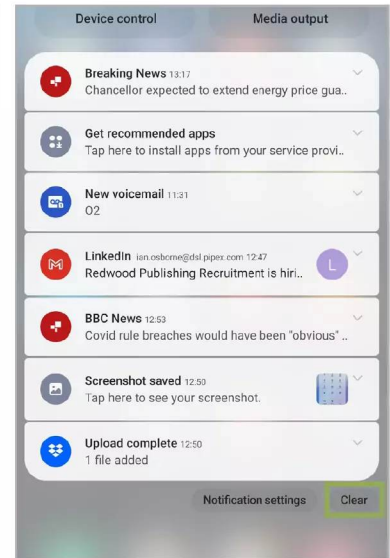
3 Drag a notification to the left or right to remove it. Tap and hold a notification for options to turn off notifications for that particular app, or to go to the settings for that app, from where you can change how notifications arrive, whether they should appear when the phone is locked and more.



4 Also on the app's Notification Settings screen is an option titled 'Notification categories'. Here you can set what app actions result in a notification. For example, in Phone services, you can choose whether to get notifications for Wi-Fi calls, Alerts, Mobile data status and more.



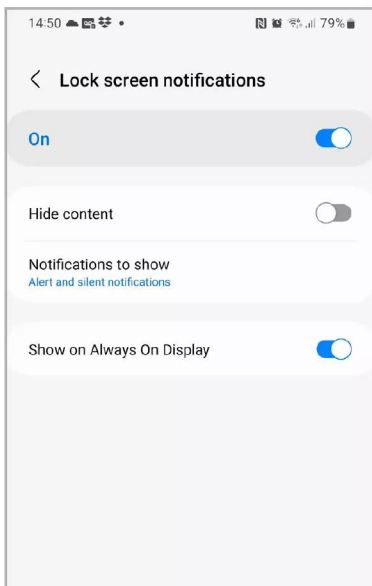
5 Tap a notification to open it in the app that created it. For example, here we tapped a notification about an incoming voice message. The notification opened our voice messages and played the message in question. An email notification opens that email in your email client.



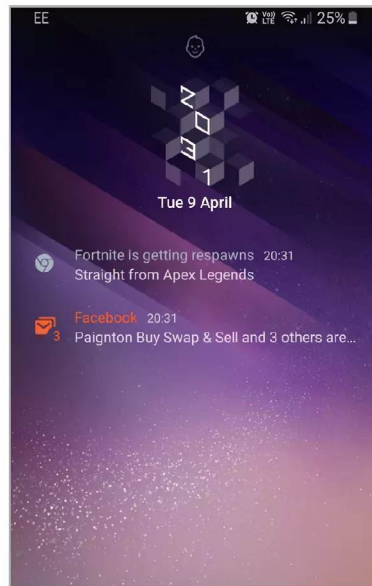
6 You can clear all notifications from the panel in one fell swoop by tapping the Clear option, which is usually found at the bottom of the open Notifications panel. Alternatively, you can swipe away individual notifications one at a time if, for instance, you want to keep some in the panel.

Lock Screen Notifications

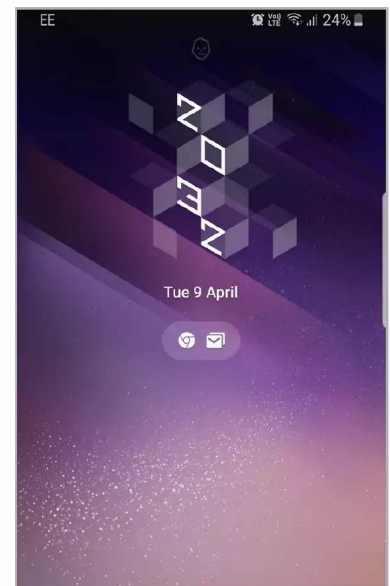
You can allow Android to display notifications on the Lock screen, and control how much information is shown.



1 You can block all notifications from your Lock screen in Settings > Notifications > Lock screen notifications. With this disabled, you only see them in the Notifications panel. If you pick this option as your default, the setting applies to all apps, however you can also choose to apply it on a per-app basis.



2 If you choose to show complete notifications on the Lock screen, you will see a similar display as you see in the Notifications panel, including some detail on the notification. If you pick this option as your default, you can still restrict certain apps on your Lock screen by 'hiding sensitive content'.



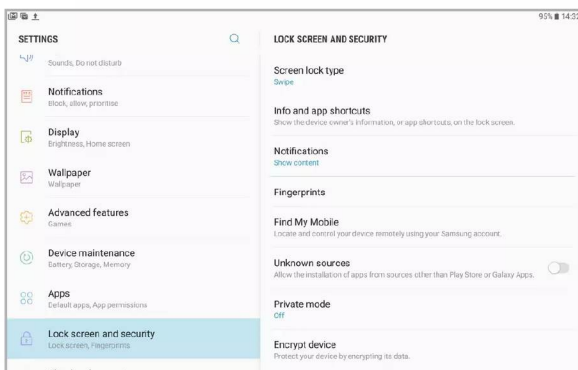
3 When you allow notifications on the Lock screen but block sensitive content, you will see icons or a heading telling you what sort of notification it is; but you will not be able to preview it until you unlock the device and open the panel. Again, you can restrict certain apps and not others.

Locking the Home Screen

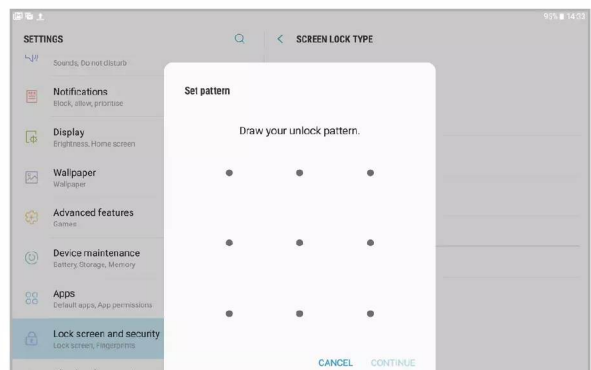
Taking care of the security on your Android device is very important, and should not be overlooked by any new user. Setting up a simple screen lock, whether that is a PIN, pattern or password, is one of the first things you should do to make your device more secure. Adding a lock screen also enables more advanced security features to be activated.

PIN, Pattern or Password Locks

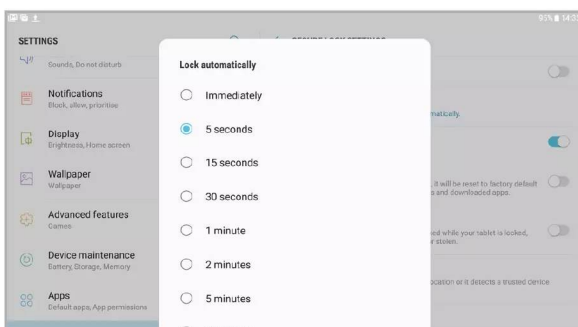
Choosing between PIN, Pattern and Password lock is down to personal preference, and also your security concerns regarding the level at which you want to protect your data. Here's how to go about making that choice.



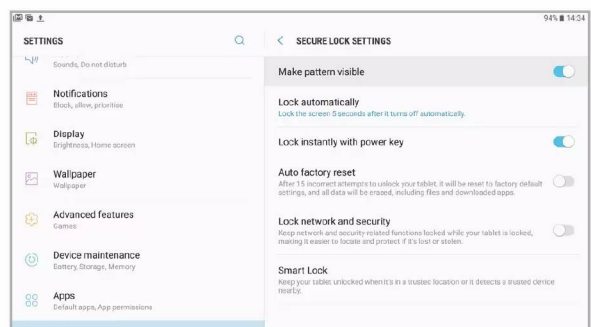
- 1 Open the main Settings and scroll down to the Security section. Screen Security is the first section, with Screen Lock the first option. Within the Screen Lock settings you will see five options: None, Swipe, Pattern, PIN, and Pattern. Swipe and None can be ignored for now.



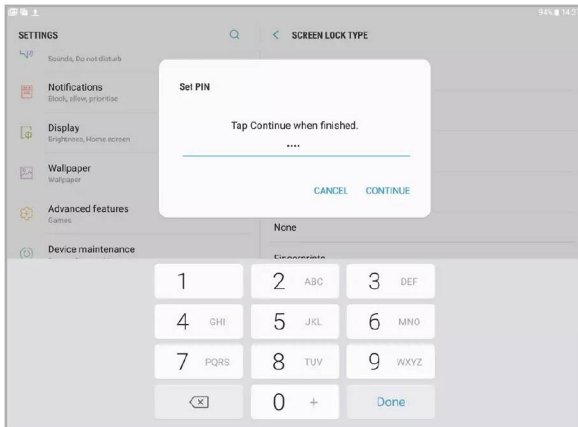
- 2 To set up a pattern lock, tap Pattern and choose whether you want to add an extra sign in on start-up. Tap Continue and draw your pattern out on the dots. The lines of your pattern can cross over each other, allowing you to make the pattern lock quite complicated and hard to guess.



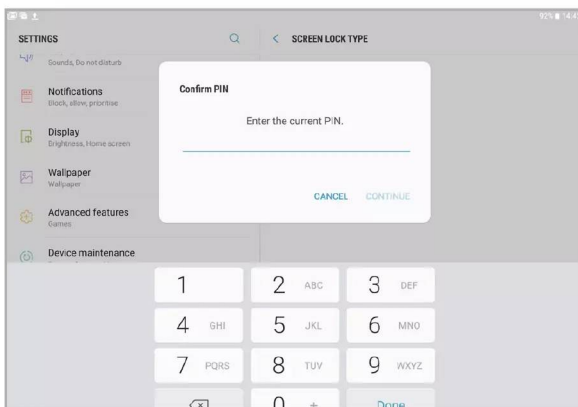
- 3 You will have to repeat the pattern on the next screen to confirm it. Once you are back on the Security Settings screen, take a look at the Automatically Lock option and change it to a period which best suits you. You should choose Immediately or a short period for the best security.



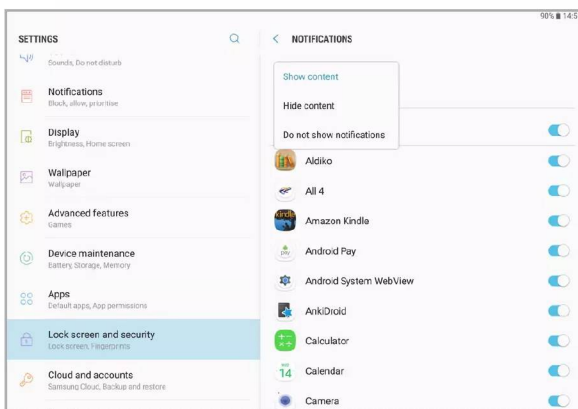
- 4 To add an extra level of security, use the slider to make the pattern invisible when you input it. This stops someone looking over your shoulder and easily seeing the pattern drawn. To check your pattern lock, turn off the screen and then turn it back on again. Enter your pattern.



5 Both PIN and password locks are inherently more secure than a pattern lock, although they are not quite so quick to input. As when setting up a pattern lock, when you set up a PIN lock, you will be asked if you want to add a PIN on start-up for extra security.



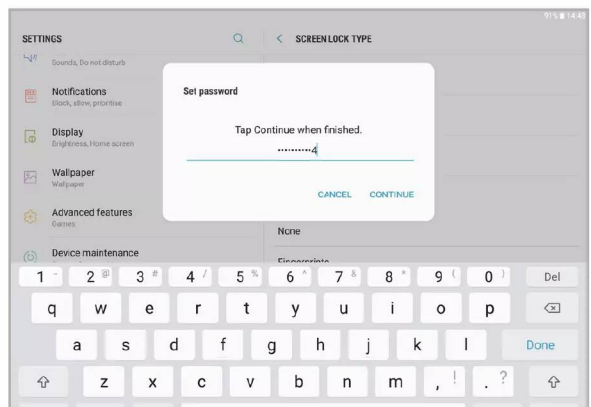
7 As when setting a pattern lock, you will have to repeat the PIN to confirm it. Once this is done and you are back on the Security Settings screen, take a look at the Automatically Lock option and change it to a period which best suits you. Choose Immediately or a short period of time for the best security.



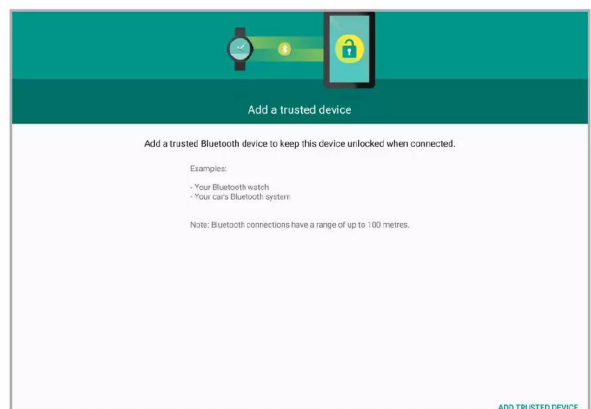
9 You can also choose how much of your notifications are shown on the lock screen once you have a lock set up. You can choose to show all of the notification content, or just show that there are notifications (without showing content). You can also disable notifications.



6 Your PIN needs to be four numbers (PIN locks are always numerical only), but steer clear of repetition or runs of numbers such as 1111 or 1234, as these are easy to guess. You should also avoid using your birth date or any other easily guessed number.



8 A password lock is the most secure type available on your Android device. Passwords can be alphanumeric and therefore the most difficult to guess if you choose well. As with a PIN lock, don't choose an easily guessed word such as your surname. The hardest passwords to crack use letters, numbers and symbols.



Smart Lock

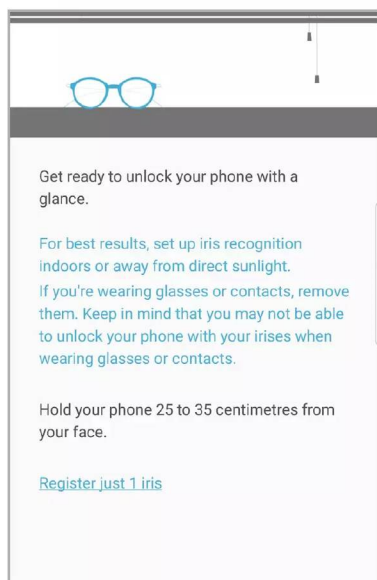
➤ If you are running Lollipop on your device, you can make unlocking easier using Smart Lock for Android. You will need to have a screen lock set up before you can activate Smart Lock.

Unlocking with Your Iris

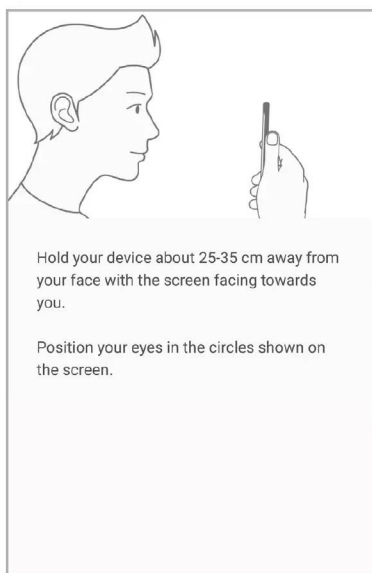
Some of the newer Android device devices allow you to not only unlock with your fingerprint but also with your eyes (or more precisely, your irises). Here's how you set up and use this feature on a compatible Android device.



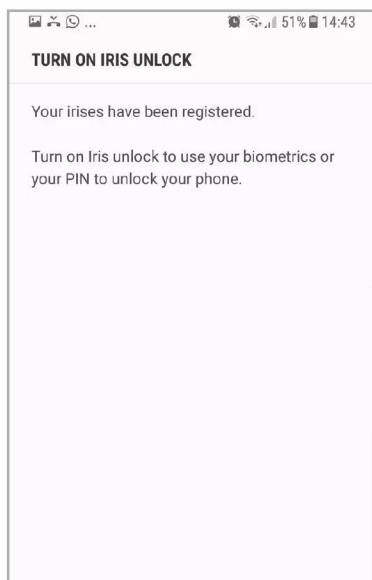
1 You can use iris recognition as an alternative to entering passwords in certain apps, just like you can use your fingerprint. You can also use your irises to verify your identity when logging in to your account. It does involve some flashing light, so be wary if you suffer from epilepsy, etc.



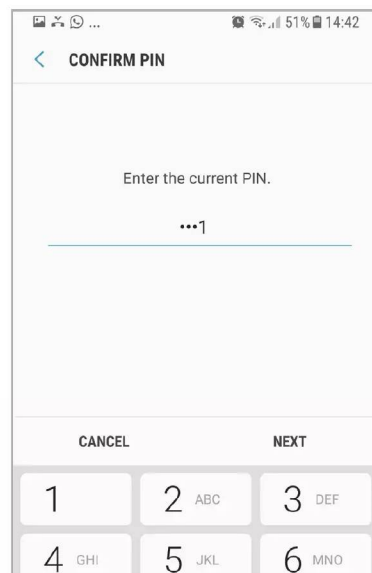
4 Enter your PIN or Password and read the instructions for best results. Tap continue and hold the phone about 25-35cm in front of your face. When the circles appear on screen, line them up with your eyes (also shown on screen) until they are recognised. Try to keep your eyes open naturally.



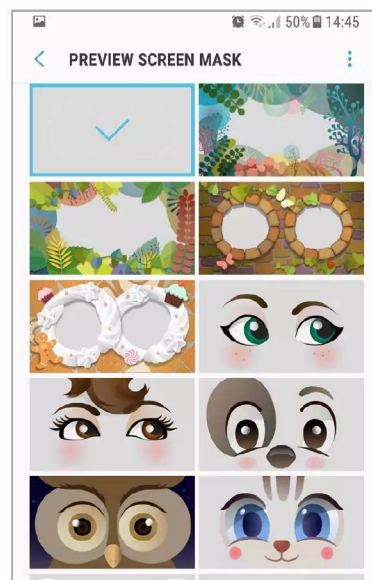
2 For best results, remove your spectacles. Do not use the Iris Scanner in bright sunlight or areas with excessive reflected light (for example, by a river); similarly, don't use the Iris Scanner in low light. Look straight at the device, not up, down or sideways and keep your head still for the scan.



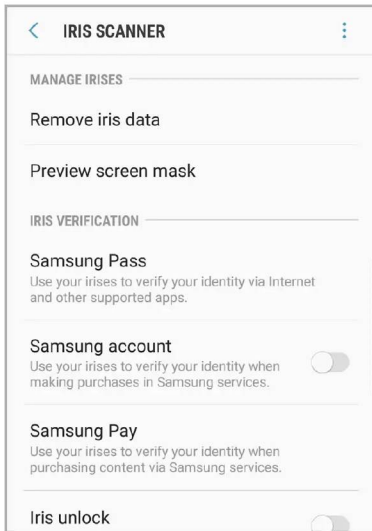
5 You can turn on Iris Unlock now, or you can use the slider back in the main Lock screen settings at any time, now that your eyes have been registered. Back in the main iris scanner settings you will also see a new section labelled Manage Irises. In this you will see the option to Preview Mask.



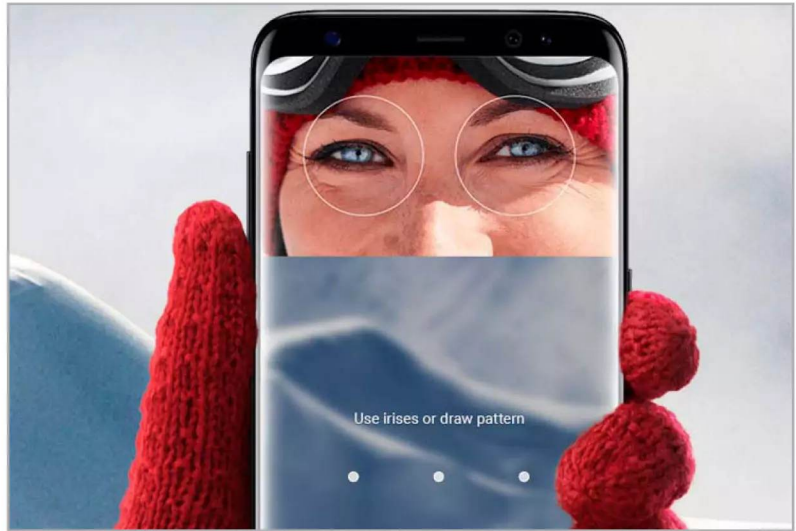
3 Just as with setting up fingerprint unlock, you will need to register your eyes so that they can be recognised when you unlock; and you must set a pattern, PIN, or password before the option is available to use. Once you have done this, tap Iris Scanner in the Lock screen settings.



6 This is a fun addition to the iris scanner that you can use or ignore. It simply adds a cartoon mask over the scanner window when it appears on screen (e.g. robot or animal eyes). If you choose a mask and then change your mind, simply come back to this option and choose the blank mask.



7 Once you turn on Iris Unlock, you will have the option to show the iris scanner as soon as you wake the screen or leave it on the default setting, which requires you to swipe the screen first before the scanner appears. Try both options and see which works best for you if you are not sure which to choose.

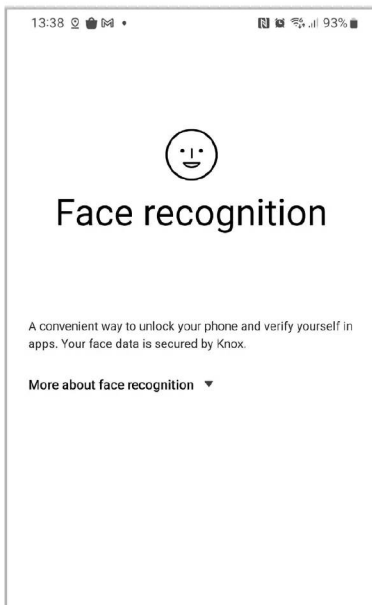


8 To use the scanner, lock your phone and then press the power button to wake the screen. Line your eyes up with the circles (or the mask if you set one). Assuming proper setup, your phone should unlock almost instantly. Your alternative unlock option (PIN, etc.) is always available to use also.

If you want to be able to use the iris scanner to authorise Android Pay transactions, use Gift Pass or to make purchases through your Android account, you will need to set up these options in the Iris Scanner settings. You always need to unlock these settings from the Lock screen settings.

Face Recognition

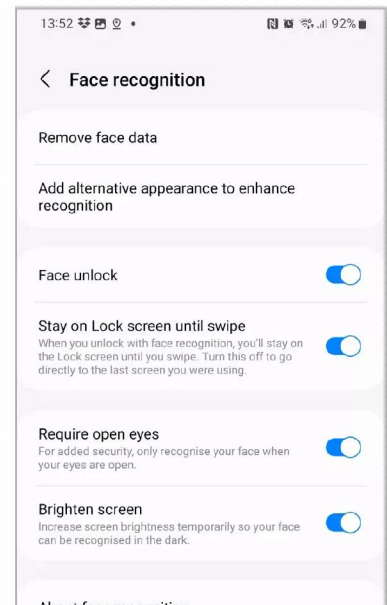
You can also use face recognition as an alternative to entering passwords in certain apps.



1 Be aware that Face recognition is less secure than Pattern, PIN or Password unlock. When registering your face, ensure that you are in a well-lit area and the camera lens is clean. To use your face to unlock your device, you must set a pattern, PIN or password first, as a backup method.



2 Tap Settings > Security and privacy > Biometrics > Face recognition. You might need to enter your PIN, pattern or password. Tap continue and then line up your face with the circle that appears on screen. Hold position until the circle is highlighted and the screen changes.



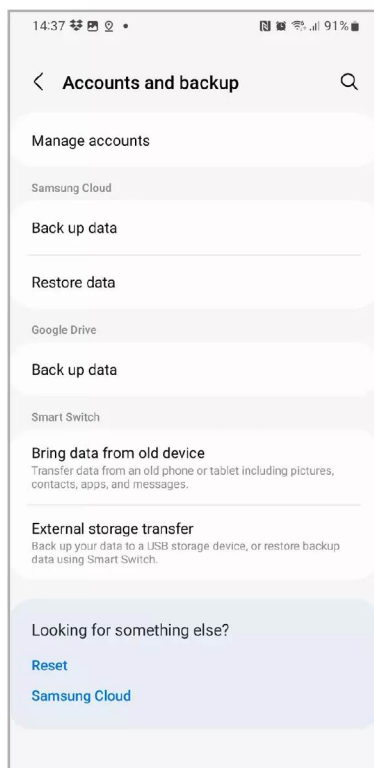
3 After registering your face, an options screen is presented to you. You can, if you wish, remove your face data from here. If you regularly change your appearance, add an alternative face with a different haircut, makeup and so on. There's also a series of on-off options that speak for themselves.

Back Up & Sync Your Android Device

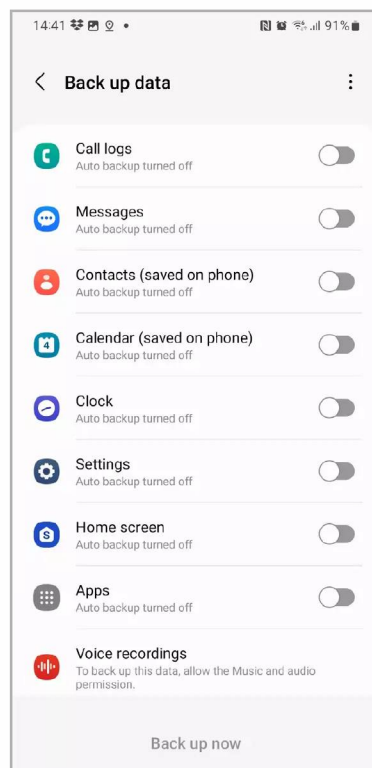
With Cloud backups, users have a backup option that works independently of USB cables and computers. It backs up native apps such as Calendar and Contacts, as well as select third-party apps; so users can start right where they left off on a new device. Your data is backed up too, so if the worst happens and you need to wipe your device or if you need to reinstall the current version of Android, you don't lose anything.

Cloud Backing Up and Restoring

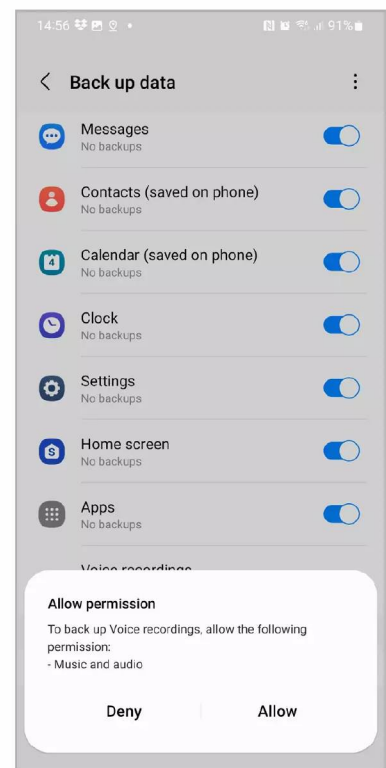
Several cloud backup options are available to Android device users. To get to them, open the Settings app and go to Accounts and Backup. From there, proceed with the following steps to back up and sync your device.



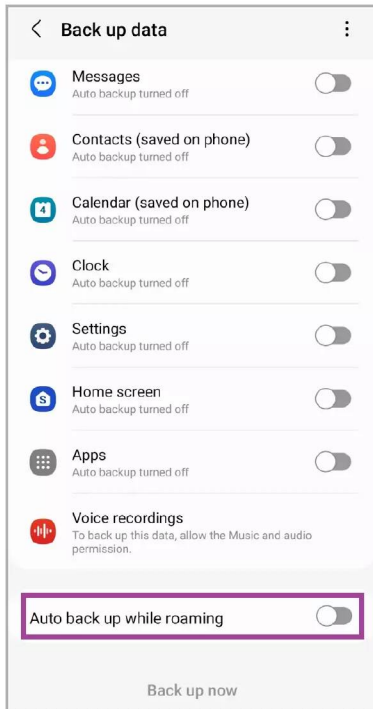
1 Open the Settings app, and go to Accounts and backup. Here you see the backup options that are available to you. In this case, we can back up to your choice of Cloud or Google Drive. We're using Samsung Cloud, which is why there's no Restore option for Google Drive.



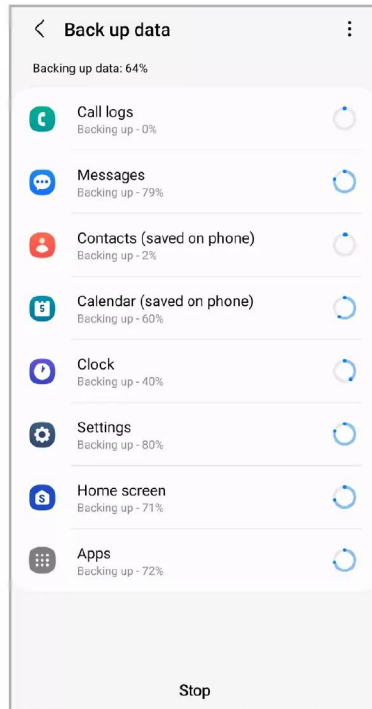
2 Tap Back up data, listed under the service you want to use. Once again, we're using Samsung Cloud. On the next screen, you're given a list of things that are optional in a backup. Switch on every item you want to include in your backup; they're off by default.



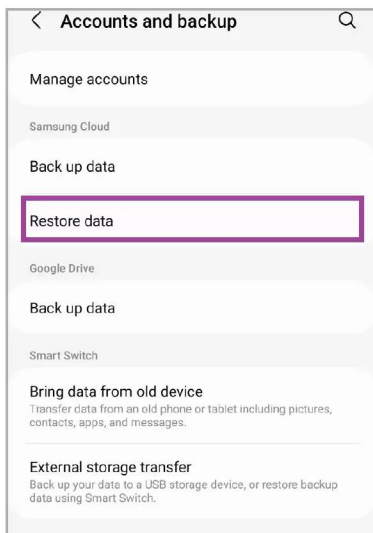
3 Some options require permissions before you can switch them on. If you have one listed, tap it and a pop-up window asks if you want to give permission for the phone to back up that particular item category. Tap Allow, and you can then switch that option on.



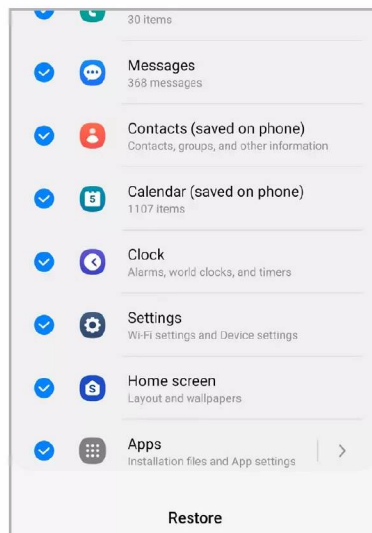
4 Scroll this screen up, and at the foot of the options list, you see an option called 'Auto back up while roaming'. Roaming charges are the additional price you might pay while using your phone abroad, and can be expensive. We suggest you leave this off.



5 When you're ready, tap the 'Back up now' link at the foot of the screen. Your Galaxy device is backed up. It takes a while first time you do it, but after that, only files that are new or have changed are copied to the cloud, so it works a lot quicker.



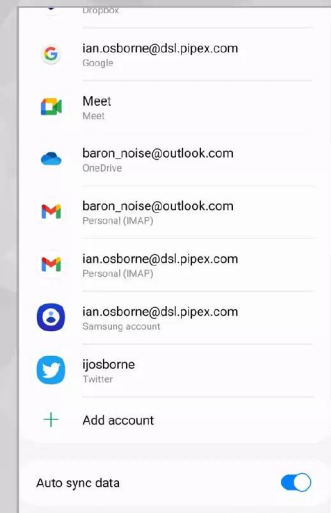
6 To restore your phone or tablet from a cloud backup that you've previously made, open the Settings app, and go to Accounts and backup. Look for the cloud service you're restoring from, and tap 'Restore data'. Review the list of backups, and choose which you want to use.



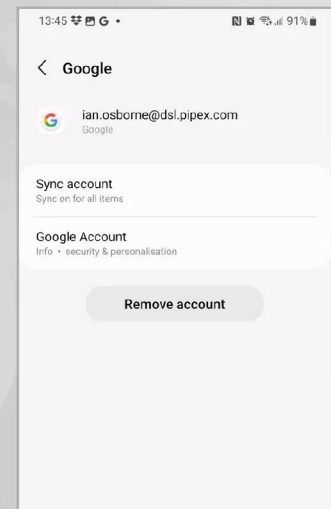
7 On the next screen, you can decide what data you want to restore. Everything's ticked by default, but if you only want to restore (say) Calendar, to retrieve an event you deleted accidentally, untick everything except the Calendar. Tap Restore at the foot of the screen.

Syncing Using the Cloud

You can also use the cloud to sync your Android devices.



➤ If you have more than one Android device, you can keep their data in sync using the cloud. That way, a note, calendar event, message and more created on one device also appears on the other. Go to Settings > Accounts and backup > Manage accounts.



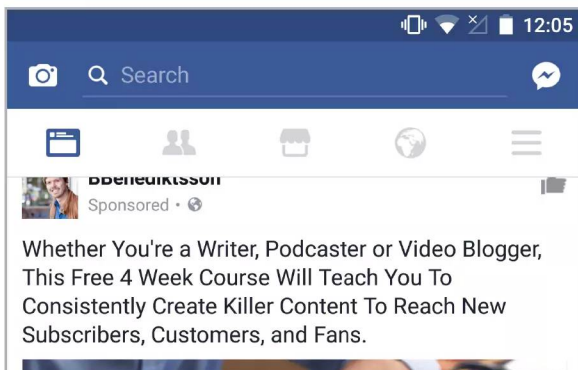
➤ At the foot of the screen is a switch that lets you auto sync all data. Otherwise, tap on a category and choose what you sync. After syncing, all devices signed into your Android account are kept in sync. Tap Add account for a list of more things you can sync.

Multi-window and Smart Capture

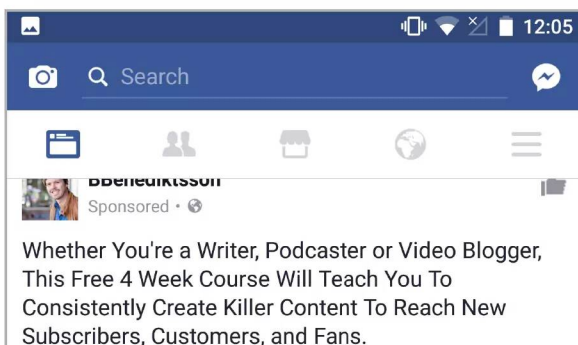
Thanks to a recent update to the Android operating system, you can run two apps side-by-side or one above the other in split-screen mode. Android device devices have had this feature for longer, but the way multi-window works on Android devices has also changed slightly. This guide looks at multi-window and then the screen capture tool, Smart Capture.

Multi-window on Android

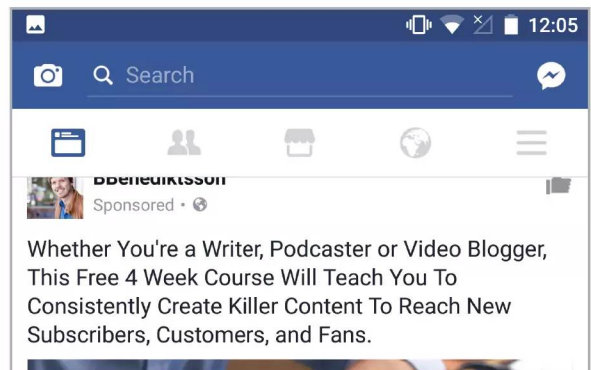
Multi-window mode on Android devices has been available for some time, and works very slightly differently to most other devices, even after updating to the latest version of Android. Here's a guide to how it works.



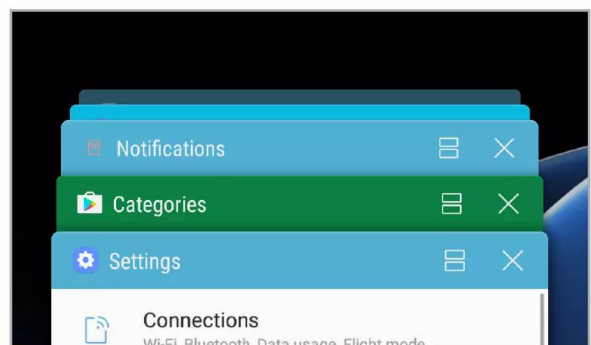
1 On your Android device, tap the Recents button to view the thumbnails of recently opened apps. On the top bar of each app thumbnail is a multi-window icon. Tap this to open the first app in the top half of the screen. You will see that the bottom half still shows Recent Apps.



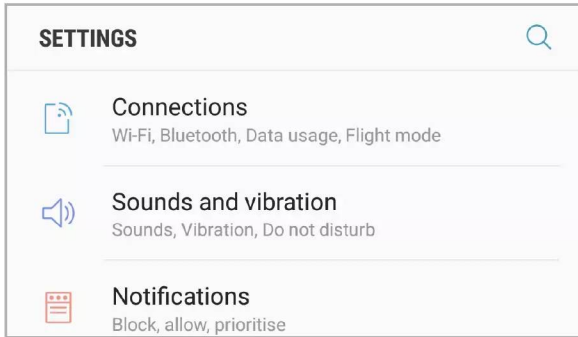
3 If you leave multi-window mode by pressing the Home button, it will stay active. A notification in the status bar will display the multi-window icon, and tapping it will switch back to the split screen view. You can cancel the split screen by tapping the X in the notification.



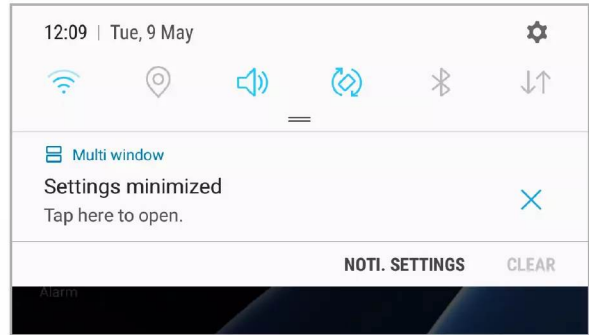
2 You can then tap the thumbnail to open an app in the bottom half of the screen. To change the ratio of the split, touch and hold on the dividing line and drag it up and down. If you drag the divider all the way up or down, you will drop out of multi-window back into single window mode.



4 You can also open an application in a pop-up window on some Android devices. To move an application to a floating pop-up window, open the application, touch a top corner of the screen and swipe diagonally toward the centre of the screen. This feature works better on tablets than phones, but may be available on both.



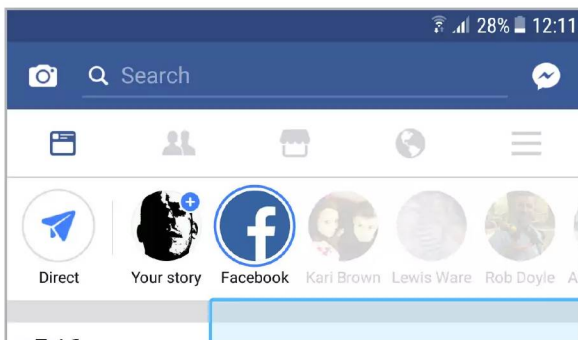
5 Touch and drag the blue outline to resize the pop-up. Touch and drag the control dot at the top of the pop-up window to move it around the screen. You can tap the arrow controls at the top of the box to change back to full screen or shrink the window down to app icon size.



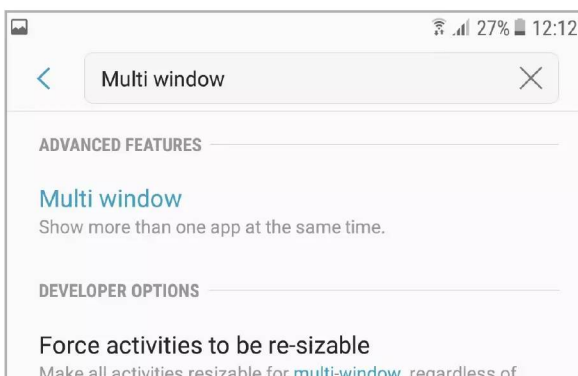
6 If you search for 'multi-window' in the settings on your Android device, you will find that there are a few options for the split screen mode. You can turn certain features on and off, and change how the mode is accessed. There is also a developer option to force apps to split screen.

Using Smart Capture

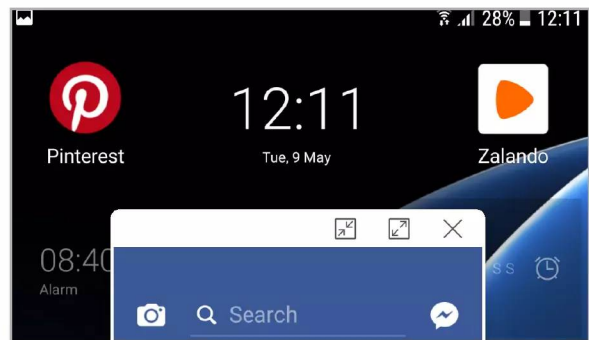
Sharing what is being displayed on your Android device screen is now easier than ever, with the addition of Smart Capture tools for most devices. Here's a guide to getting the most from Smart Capture on your Galaxy device.



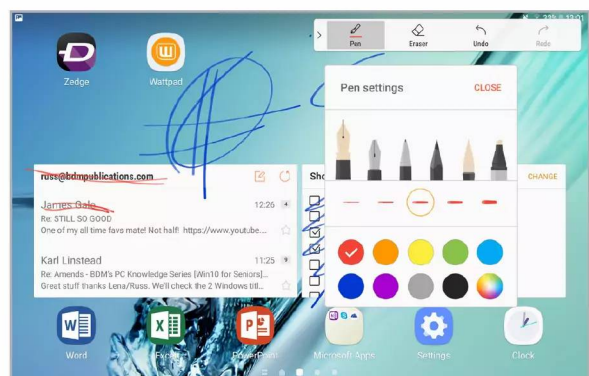
1 If you didn't already know, you can capture a screenshot of your device by pressing and holding the Home key and the Power key simultaneously. You can view captured images in Gallery. You can also capture screenshots by swiping your hand to the left or right across the screen.



3 Once activated, the Smart Capture tools appear along the bottom of the screen in a transparent bar for a few seconds each time you take a screenshot. You need to be fairly quick to choose the Smart Capture tool you want to use, so it is good to know what each tool does.



2 With Smart Capture switched on, you can capture the current screen and scrollable area. You can also immediately crop and share the captured screenshot. If this feature is not activated, open Settings > Advanced features > Smart capture and tap the switch to activate it.



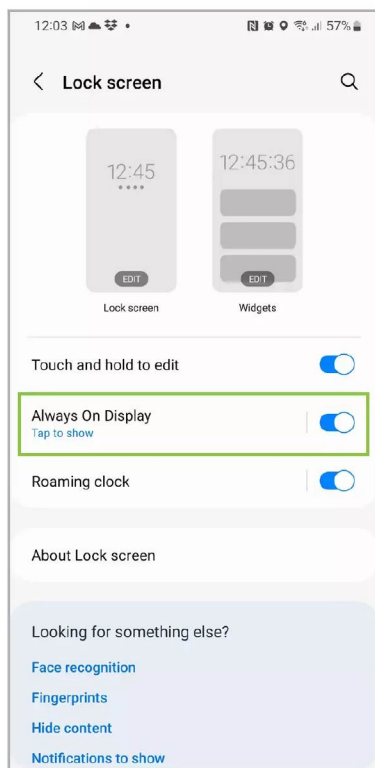
4 On the far left is Scroll Capture. Next to that is the drawing option, which brings up a selection of drawing tools, as well as crop, save and share buttons. Crop lets you trim your screenshot down immediately, rather than making you open it in Gallery. Share lets you share the image.

Always On and Display Widgets

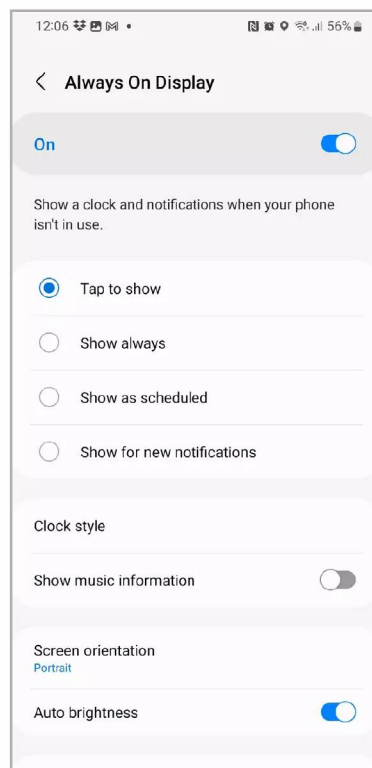
The Always On Display (AOD) feature allows users to check the time and date with ease and also keep an eye on missed calls and message alerts, even when the phone is not in use and just on standby. There's no need to tap the screen. The Always On Display can be customised to include clocks, images or calendars of different styles. Let's take a look at some of the ways you can use and adapt the Always On Display on your Android device smartphone.

Always on Display

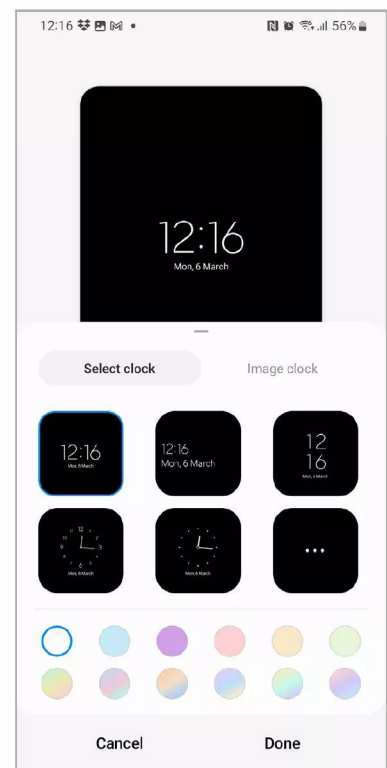
The Always on Display shows information in a very low power way, using less than one percent of your battery life per hour. If your battery power drops below five per cent, the display turns off. Here's how to set up your AOD.



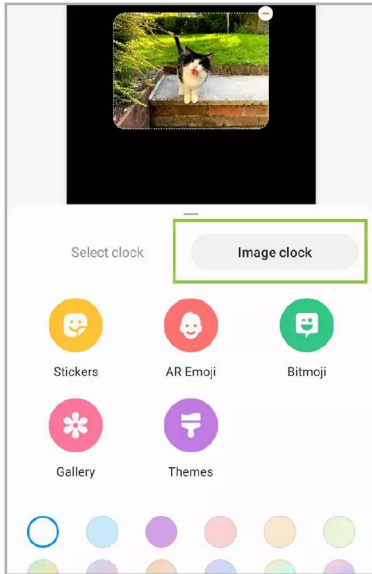
1 Head into the main Settings app on your Android device and look for the Lock Screen settings. About halfway down the list of settings you see 'Always on display'. Tap the switch to turn this option on. The lock screen is now shown even when the Galaxy device goes to sleep.



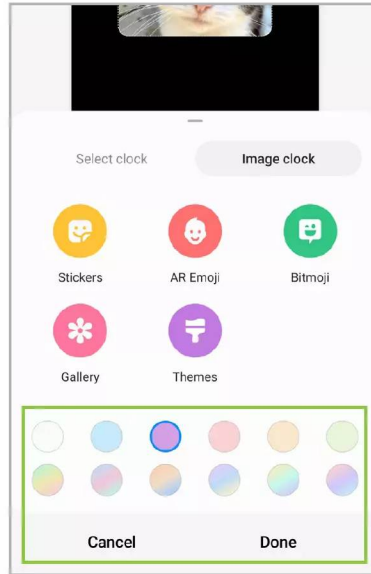
2 Tap the Always on Display option to show its settings. You can change how the Always on Display behaves, such as whether you need to tap it to show or it's shown always or according to a schedule. You can also show information about music being played on the Always on Display.



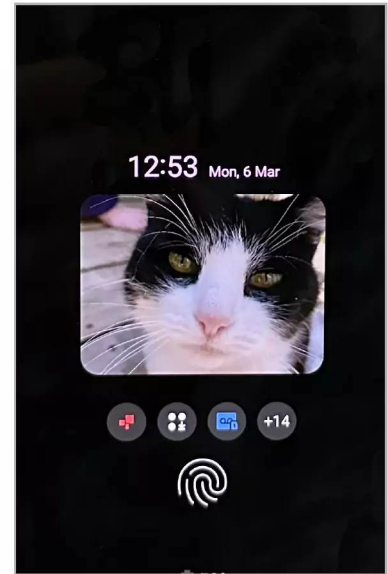
3 Tap the Clock style option and you can choose how your Android device clock is configured on your Always on Display. You can choose between a digital or analogue clock, with day and date options available too, including forthcoming Calendar events.



4 After choosing your clock, you can add a GIF or a photo if you want. Tap the Image Clock bubble, and you can then add a sticker, an AR Emoji, a Bitmoji, a picture from your Gallery or choose from a Galaxy Theme. You can use gestures to fit a picture in the frame.



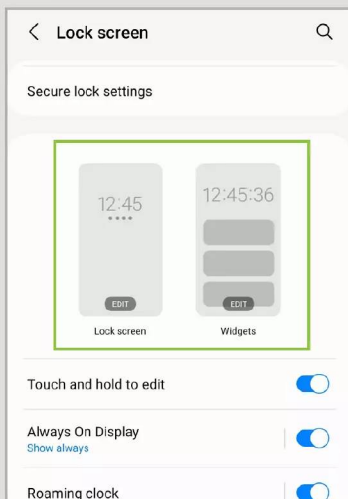
5 You can change the colour of the clock using the colour pickers lower down the screen. These can be solid colours, or a gradient involving multiple colours, depending on which colour picker you choose. As you can see in the preview atop the screen, the clock colour changes.



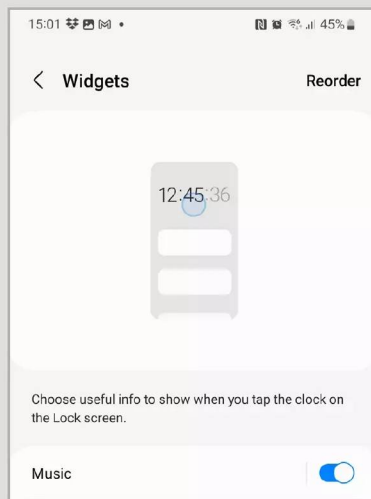
6 To save your new layout, tap the Done link in the bottom-right corner of the screen. Your settings are saved, and next time your Android device sleeps, it shows your new lock screen with your clock and if applicable, your picture in place on the always-on screen.

Display Widgets

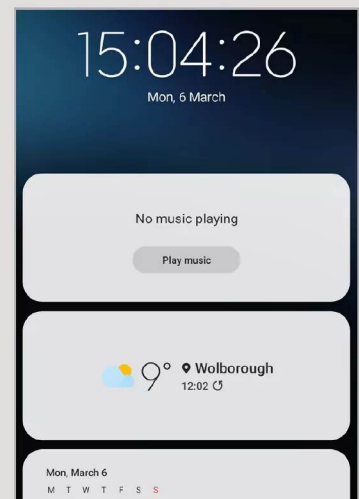
You can add and remove widgets to your always on display too, and activate them by double-tapping the clock and then swiping it down, without even unlocking your device. Here's how to go about it.



1 Open the Settings app and then tap the Lock screen option. Scroll up until you see the Lock screen and Widgets graphics. Tap the Lock screen graphic to edit what you see on the Lock screen when the phone is awake. Tap Widgets to edit Lock screen Widgets.



2 After tapping the Widgets graphic, you see this screen. You can choose which widgets to add to this screen, and which to remove – simply tap the switch next to each widget to turn them on or off. Tap Reorder (top right) and you can change the order in which they appear.



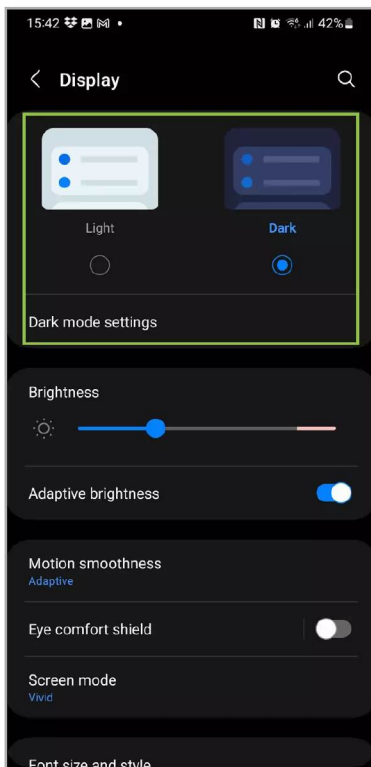
3 Now, when you're looking at the always-on screen, you can double-tap the clock and then swipe the screen down. Alternatively, on the Lock screen, simply tap the clock. You're shown the Widgets screen, with your chosen widgets on display.

Dark Mode, Blue Light and Brightness

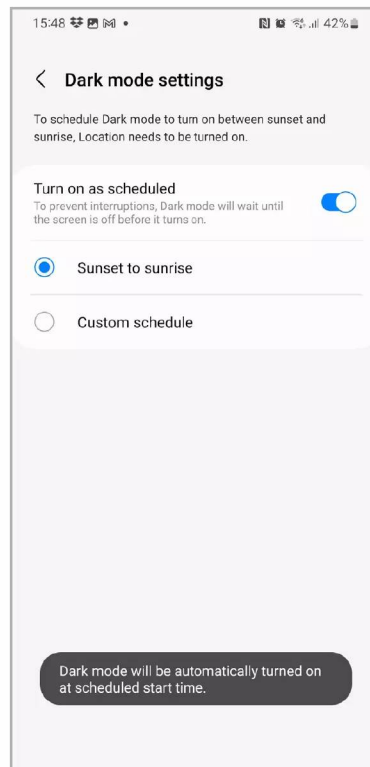
Your Android device gives you a lot of control over your display and brightness settings. Each display option is designed for a different reason, but getting any and all of them set up to your liking makes using your Android device a much nicer experience and may even help you save some battery power. Here's a guide to setting up your screen options.

Dark Mode

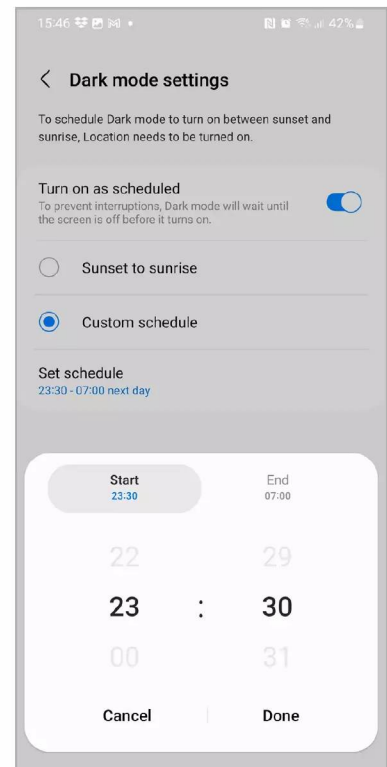
Dark mode, which turns much of the interface black instead of the default white, can be scheduled to turn on and off at regular times as well as being enabled as and when you want to. This is how to do it.



1 Open the main Settings app and look for the Display settings. Here you can find the option to enable Dark mode, as well as the options to configure it. If you just want to turn Night mode on straight away, just tap the Dark graphic and you see the Settings screen change to black.



2 If you want to schedule Dark mode, tap Dark mode settings underneath the graphics. You have the choice of scheduling Dark mode for sunset to sunrise, or you can choose a custom schedule. If you choose sunset to sunrise, Location needs to be enabled to detect the right times.

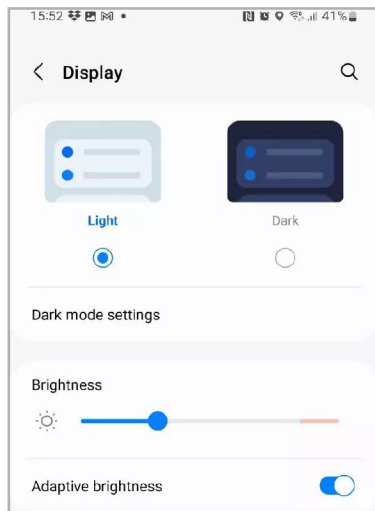


3 When you choose a custom schedule, you have to pick a start time and an end time for Dark mode. Dark mode is very useful for saving battery life when combined with Adaptive Brightness, as it gets rid of most of the white on screen, which uses more power to display.

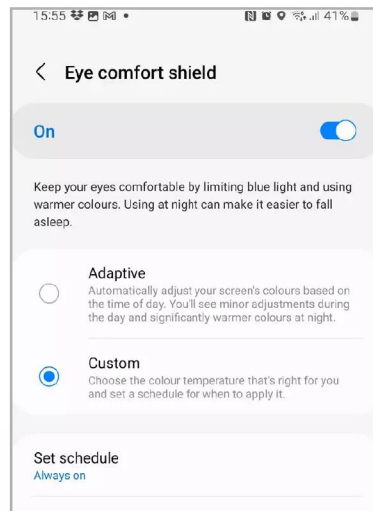


Blue Light Filter

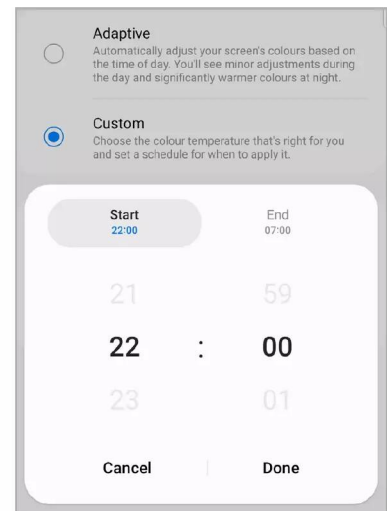
The Blue light filter is designed to help reduce eye strain and can also help to promote restful sleep.



1 Open the main Settings app and look for the Display settings. Here you can find the slider to enable the Eye comfort shield which filters the blue light from the screen, as well as the options to configure it. Tap the switch to turn it on; the screen is given a yellow tinge.



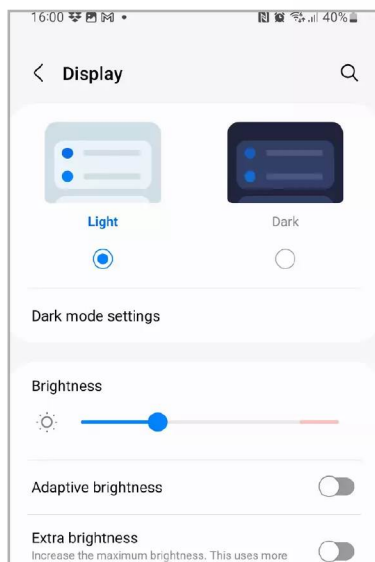
2 To change the settings of this blue light filter, tap Eye comfort shield to open its options. Adaptive reacts to current ambient light conditions, or choose Custom to set your own colour temperature with the slider that appears. This takes effect when Eye comfort shield is on.



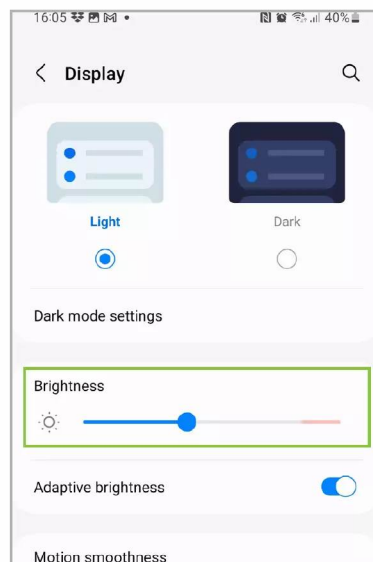
3 You can also set the Eye comfort shield to turn on as scheduled. As with the Dark mode, you can choose sunset to sunrise (if Location is on), or you can use the Time settings to choose a start and finish time for the filter that better suits how you use your mobile device.

Adaptive Brightness

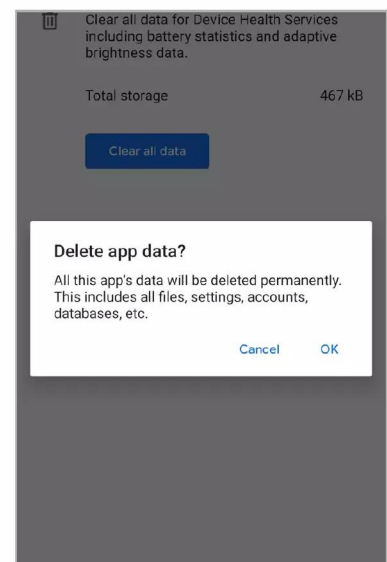
Adaptive brightness learns the brightness levels you prefer at different times and automatically adjusts.



1 Open the main Settings app and look for the Display settings. Here you will see the heading for Adaptive Brightness, along with a slider to turn it on and off. Once the feature is switched on, your screen will probably go slightly darker.



2 Go back out to the main Display settings and use the slider at the top of the screen to set your brightness to how you like it. Whenever the brightness changes automatically, you can override it using the brightness slider.



3 If you find Adaptive brightness is setting the brightness incorrectly, you can reset the usage patterns, which starts the process of learning all over again. Go to Settings > Apps > Device Health Services > Storage > Manage Storage and tap Clear all data.

Your Android Device's Camera

The camera hardware, and software, is an important feature of many people's phones. We use our phones to capture everything from Instagram selfies to the kid's school performances, so knowing how to get the best from the camera is one of the first things many users want to know.

1 Shutter Button

The job of the Shutter button is fairly obvious: to take a photo. Press the button once to take a single photo, or hold the button down to activate burst mode, which will take up to 20 photos in very quick succession. The Volume down button on your phone can also be used to take photos.

2 Settings

There are quick settings here to change aspect ratio, turn the flash on or off, set a timer, and change the photo filter. The quick settings will change depending on the camera mode (photo, video, panorama, etc.). You can also access the main camera settings from this menu.

3 Lens Select

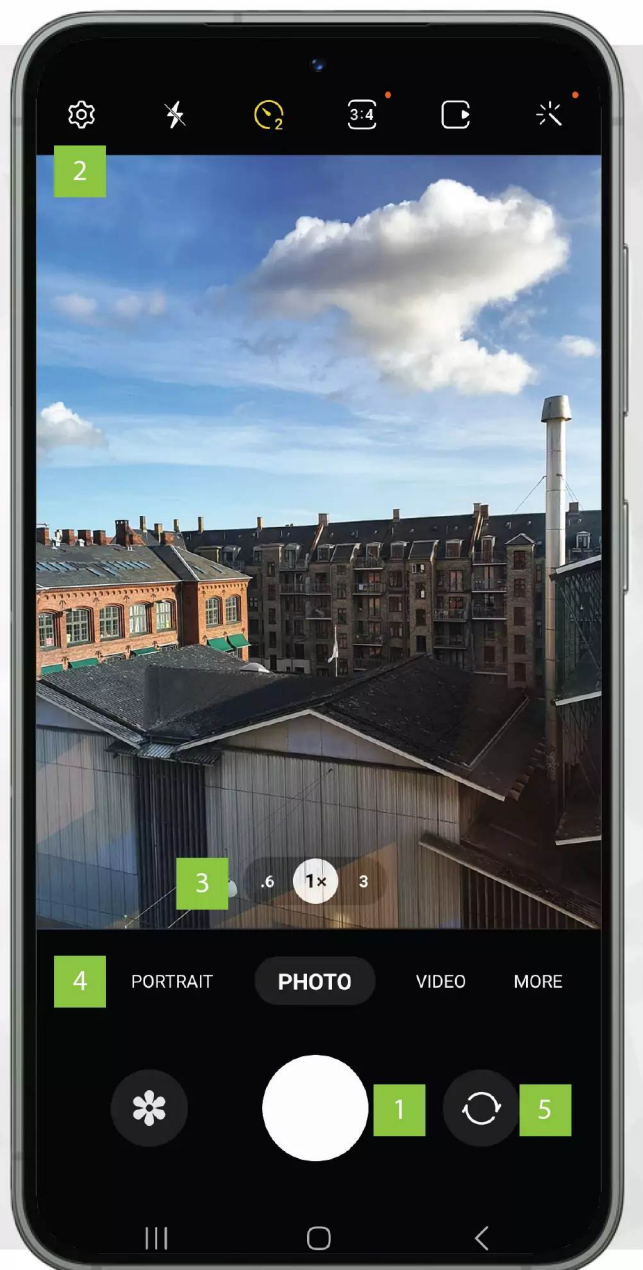
Many Android device cameras now offer the use of different lenses. This button lets you choose between Wide angle (the standard lens), Ultra-wide angle, and Telephoto (2x optical zoom). You may see slight distortion when using the Ultra-wide lens.

4 Camera Modes

The scrolling menu, just below the viewfinder window, lets you quickly switch between camera modes that include: Video, Super Slow-mo, Live focus, Professional, Panorama, Night mode, Food, and Instagram modes. Each mode has tools and options specific to it.

5 Camera Select

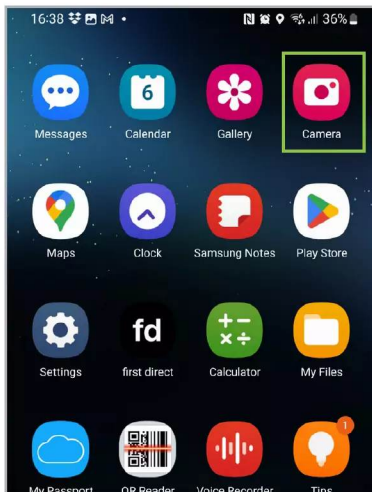
This button switches between the front and rear cameras on your phone, so you can take selfies or use the filters and effects on yourself. You can also switch between front and rear cameras by swiping a finger up the screen. The other button at the bottom opens the last photo taken in the gallery.



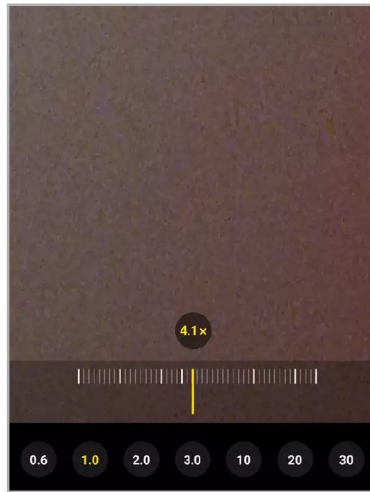


Taking Photos

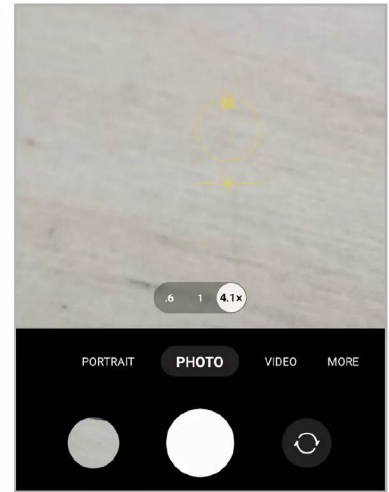
All of the newest Android device cameras have approximately the same features, and work in very similar ways.



1 You can open the camera in a couple of different ways. To use the camera without unlocking your phone, you can drag the lock screen Camera button to the middle. You can also double-press the side button to quickly open the camera app. On an unlocked phone, tap the Camera icon found on the Home screen.



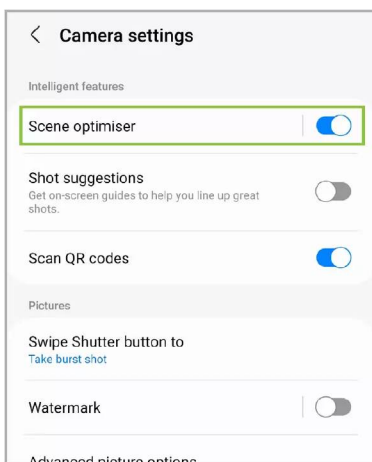
2 Tap the image on the preview screen for where the camera should focus. To use the digital zoom, spread two fingers apart on the screen to zoom in, and pinch to zoom out. You can also drag the Lens selection icon (at the bottom) left or right to zoom in and out. You can only zoom when using the rear camera.



3 You can adjust the brightness by double-tapping the screen and, when you see the adjustment bar, place and drag your finger left or right. When everything is set up to your liking, tap the circular Shutter button to take the photo. If you hold the button, you will take a burst shot of up to 20 images in a second or two.

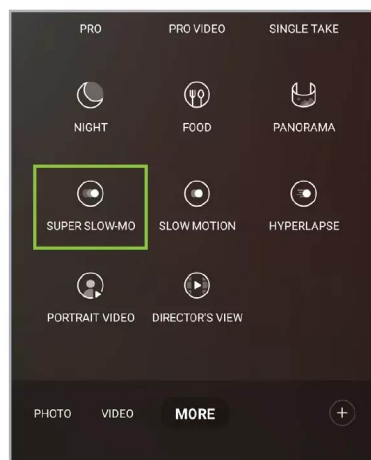
Android Camera Modes

The camera and camera software vary between Android devices, but they're all similar to the one shown here.



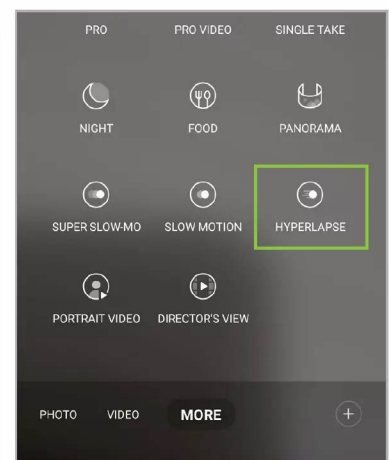
Scene Optimiser

> The Scene Optimiser is now turned on or off in the camera settings (top left). It allows the camera to adjust the colour settings and apply optimised effects automatically by recognising the subject. For example, if it recognises food it uses a different colour profile than when it recognises a face.



Super Slow-mo

> Super slow motion is a feature that records a quickly passing moment slowly, so that you can appreciate it more easily later. After the video is recorded, background music will be added automatically. To access it, turn the Camera Modes slider to More, and tap the icon.



Hyperlapse Mode

This camera mode allows you to record scenes, such as passing people, animals or cars, and view them as fast-motion videos. Depending on lighting conditions, this can work really well at night. If you set the frame rate to Auto, the device automatically adjusts the frame rate accordingly.

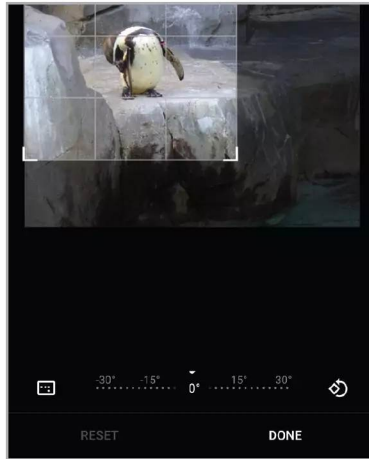
Android Camera Tips and Tricks

Cameras on Android smartphones vary greatly in terms of features and image quality. However, photos taken with even fairly basic Android cameras can usually be improved by following some simple rules.



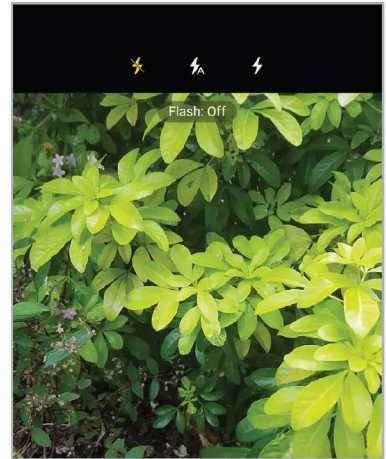
Clean the Lens

The app gives you much greater control over the auto-focus settings, allowing you to choose from several different modes. These include Auto-focus, Manual-focus, Macro (for close up shots), Face detection focus, Touch focus and even Infinity focus, which is usually found on high end cameras.



Don't Zoom, Crop!

On most Android phones, the only way to zoom is to use the digital zoom. Digital zoom works by increasing the size of the pixels on screen to make the image larger. Increase the pixel size and you always lose image quality. It is better to crop the focus of the image in a wider shot without zoom.



Turn Flash Off

If you are in the pitch black, outside, using the flash is probably unavoidable but if you have other lighting options, it is usually better to use them, rather than using the flash. Camera flashes are getting better but still often result in harsh, washed out images.

High Dynamic Range

HDR or High Dynamic Range, is becoming a standard feature on more smartphone cameras and, when used correctly, can really help to improve photos. HDR mode captures three different versions of a single shot, at low, standard and high exposure. These images are then automatically stacked to create a single image that is hopefully closer to what the human eye sees.

That said, there are certain situations where HDR will produce better results than others and it is worth remembering that just enabling HDR will not save a badly taken photograph.

Use HDR for:

1. Landscapes. HDR mode is perfect for images of landscapes and nature scenes. You should notice bluer skies and richer details in trees, plants and buildings.
2. Direct sunlight. For those situations where the sun is right behind the subject you're shooting and there's no way around it.

Don't use HDR for:

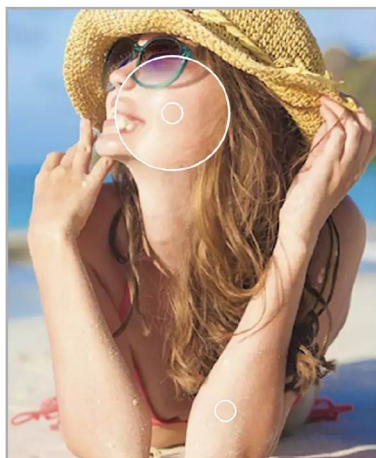
1. Action shots. It is very hard to take a good HDR image of moving objects. Moving subjects will usually just result in a blurred composite image.
2. Portraits. Using HDR for portrait images can sometimes result in too much detail. A slightly softer edge is often preferable for photos of people.





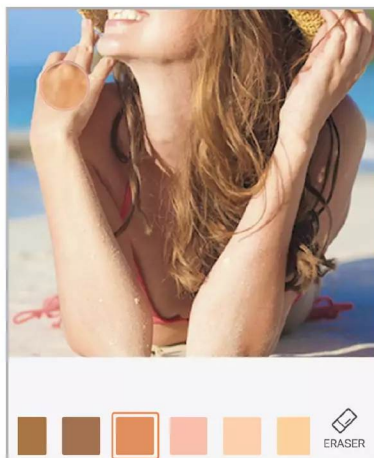
AirBrush: Easy Photo Editor

AirBrush won't help you take better photos but it certainly can help you to improve the photos you have already taken. It includes loads of airbrushing tools, including these.



Blemish

Remove annoying acne or spots from your photos. Zoom in on the blemish and tap and hold on screen. Move your finger to highlight the spot and then lift your finger off. The blemish should disappear, or at least lighten. You can repeat the action for stubborn blemishes.



Skin Tone

Choose a skin tone you desire from the palette at the bottom and then tap and hold on the image. Rub your finger over the photo to gradually change the skin tone closer to the colour you chose. You can be quite bold with your rubbing, as the app is clever enough to avoid non-skin areas.



Reshape

Reshape does what it says, letting you reshape objects in a photo. That could be a waist, nose, even a group of balloons. Open a photo and tap next to the edge you want to reshape (beside the waist, for example) and then drag your finger in the direction you want to reshape. Easy!

Adding a Clip-on Lens

A simple way to improve your camera's capabilities is to add a clip-on lens. These can be bought fairly cheaply (although you can spend quite a lot if you wish) and let you take different types of photos.



Olixar Lens Kit

Enhance your smartphone and tablet photography with this universal 3-in-1 lens kit. Combines fisheye, wide-angle and macro lenses and is unique in that it does not require a special case or adapter. Simply use the clip to attach over the existing camera on your smartphone for immediate results.



10x Macro Lens

The Macro lens allows you to achieve shots that are extremely close to an object, great for taking shots of small items to view every last detail up close. With a bit of practice, this lens can give you some really interesting and unique images of even everyday items you find laying around.



Wide Angle Lens

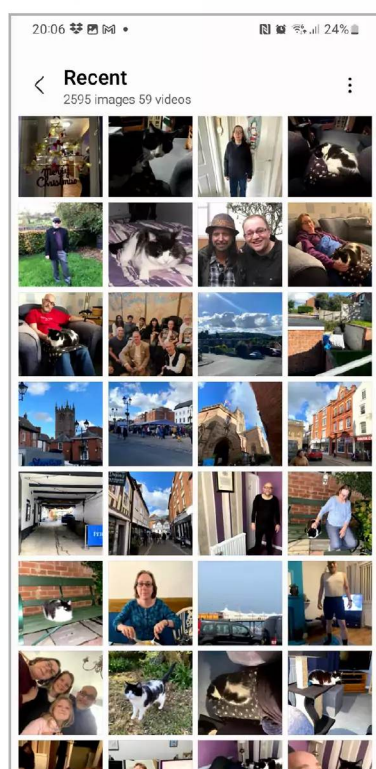
Perfect for capturing more of the world around you, allowing you to take photos of landscapes and group photos far easier than ever. Think of the wide angle shot as something between standard and panoramic, letting you capture more of a subject, without creating a huge image.

Editing Images in the Gallery App

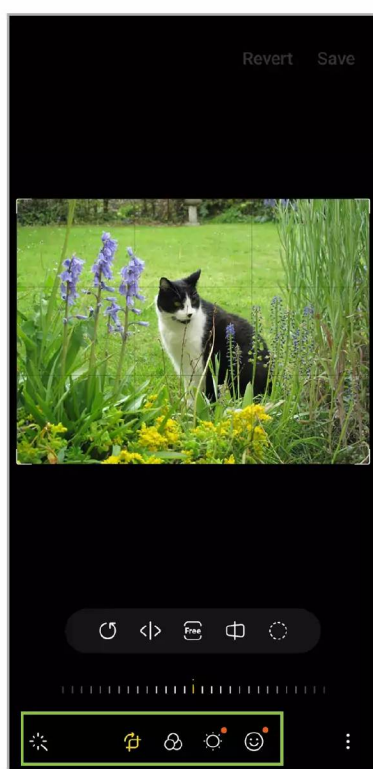
The Gallery app on your Android device is not only useful for viewing all of your photos, images and picture downloads. Gallery also includes a photo editing tool that allows you to adjust the quality of your images after you have taken them and even add fun effects and decorative stickers. We're using the latest version of the Gallery app, so if you haven't updated in a while, these tools might differ a little from what you see here.

Adjust and Improve Images

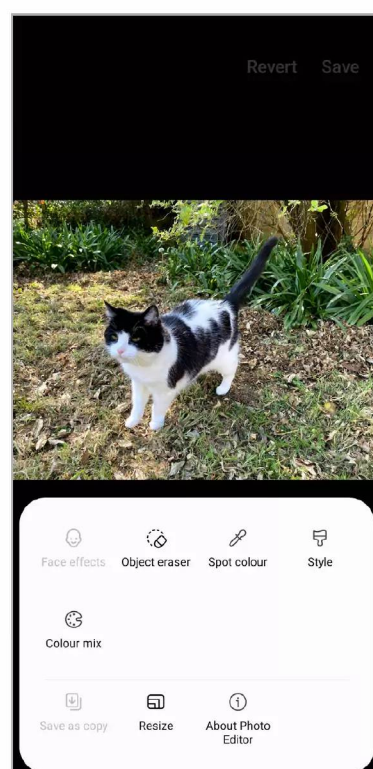
There are lots of third-party image editing apps, but the tools built in to the Gallery app can do a very good job of helping you improve your images. Here's a guide to getting you started in the Gallery editing tools on your device.



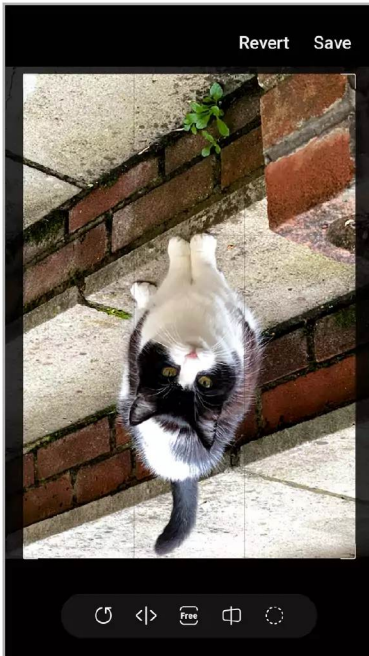
1 Open the Gallery app and find the image you want to edit. The app automatically sorts images depending on their source: photos from the camera, downloads, WhatsApp images, etc. Tap the image to open it on screen and to see the first set of edit options in Gallery.



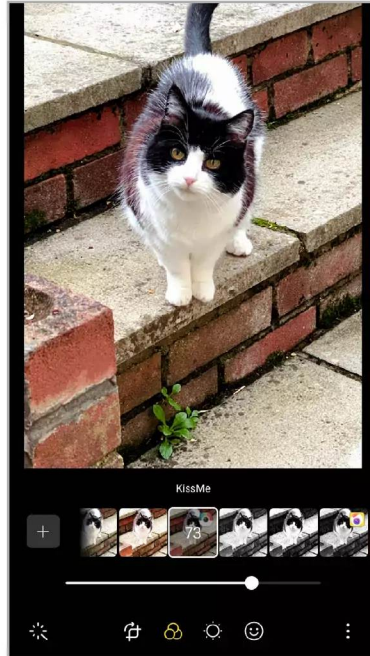
2 To open the editing tools, tap the pencil icon under the photo. The basic tools (along the bottom) are, from left to right: Auto Enhance, Crop/Rotate, Effects, Brightness and Exposure, Add Stickers/Add Text/Draw. Tap one of these to open an additional set of options above them.



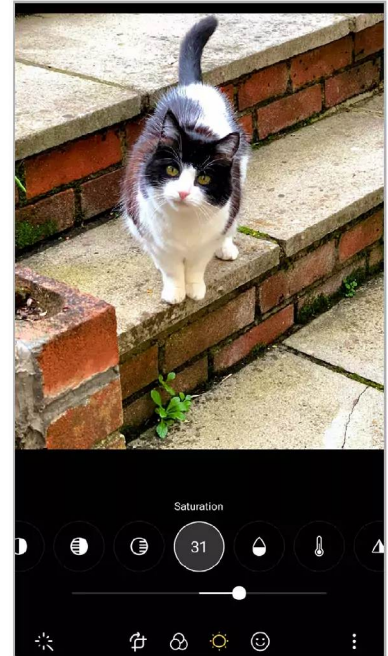
3 Tap the three-dots icon (bottom left) to open a window that makes a few more options available. These give you Face effects, which let you improve skin tones, an object eraser to get rid of unwanted items in the picture, style filters for all sorts of picture effects and more.



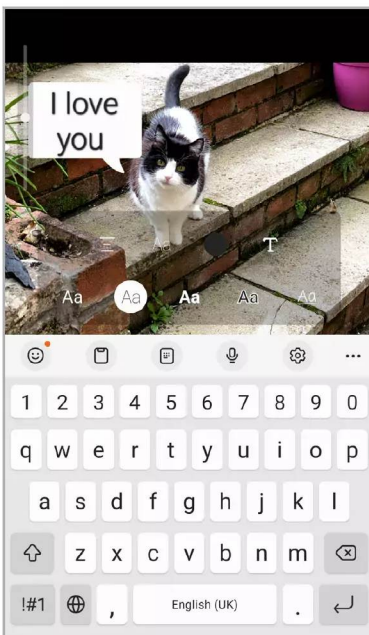
4 The Transform tools give the option to crop the image down to a better size; also you can rotate the image, flip it vertically, crop it to a specific aspect ratio (16:9, etc.) and change the perspective. Each tool offers additional options, sliders or selections, to allow for fine tuning the effect.



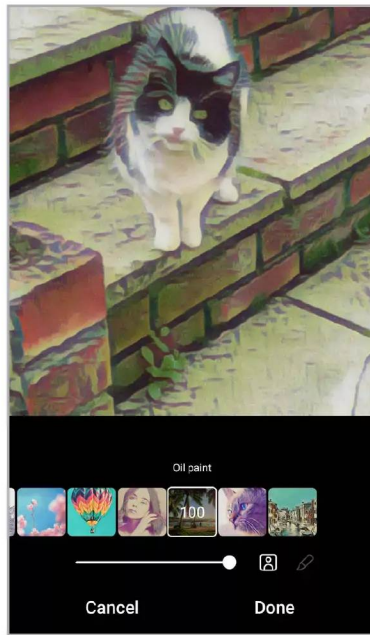
5 The Effects tool offers a quick and simple way to alter the colour or style of the whole image. Simply select the effect from the scrolling bar along the bottom to see it on the image. You can then fine-tune the effect by tiny increments, using the slider bar.



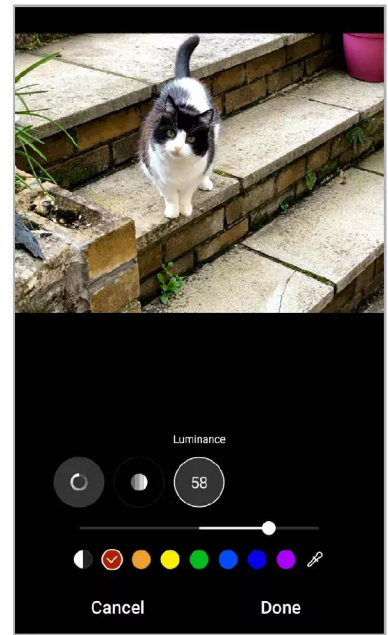
6 The Tone tools let you adjust, with an impressive level control, things like brightness, exposure, contrast and hue. Unless you're a photographer, you might not understand what all of these do, but experimenting is great fun. You can always undo the changes.



7 The Decoration tools are perhaps the most fun to play around with, and more about adding to the image than making corrections. You can paste your own images over the top of the main one, add fun stickers, add labels and add a blurred or pixelated area on the image.



8 Tap the three-dots icon and choose the Style option and you can give your picture a whole new appearance. Just drag the slider left and right to switch between them. You can make your photo look like a pencil drawing, a comic, a watercolour, a pastel pic and more.



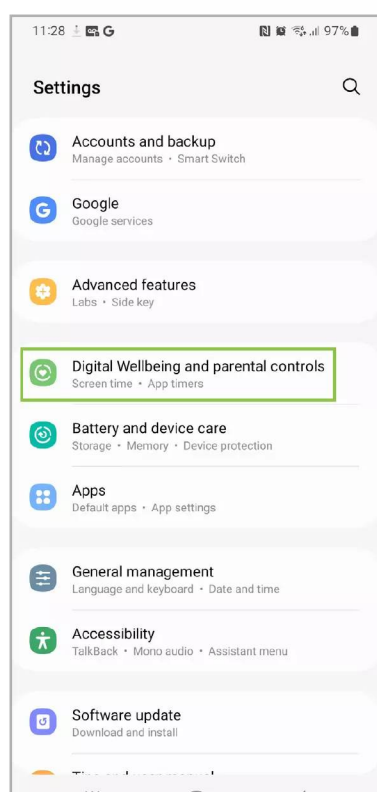
9 Using the Colour mix tool (again from the three-dots menu) you can change the Hue, Saturation and Luminance of each individual colour in your picture. It's too red? No problem – tone it down. The greens look washed out? Simply use the slider to boost their colour.

Digital Wellbeing with Android

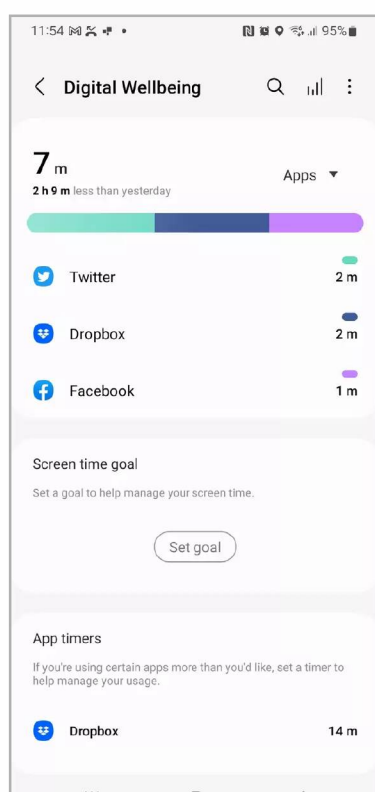
Are you spending too much time on your phone or tablet? Digital Wellbeing is a way for users to easily identify how much they are using their device, how much time they spend on different apps, and if they feel it's necessary, ways to reduce that usage or make it less intrusive to their lives. Here's how you can take control of your digital wellbeing on your Android device, quickly and easily.

Digital Wellbeing

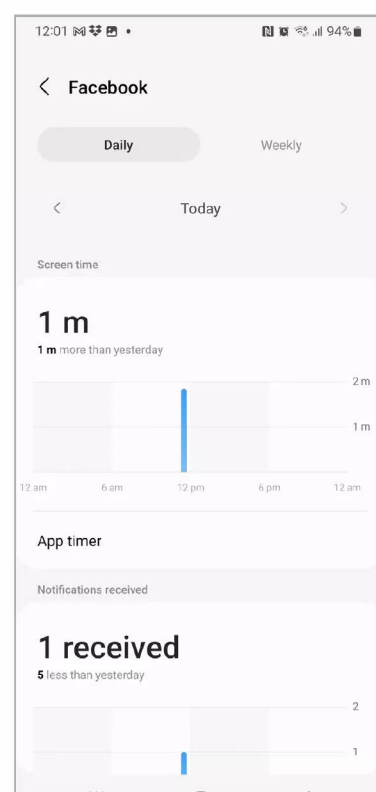
When you've set it up, Digital Wellbeing is a great tool for helping you to keep control over your digital life. At last, you have a tool to keep tabs on your online activity, and help you reduce your social media use if you see fit.



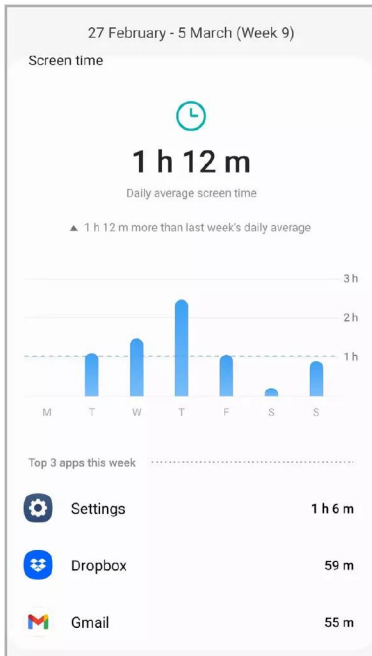
1 The Digital Wellbeing settings and controls are found in the main settings of your Android device, where it has a section with the parental controls. If you've also installed the Digital Wellbeing app from Google, you can find this in the main app drawer of your phone or tablet.



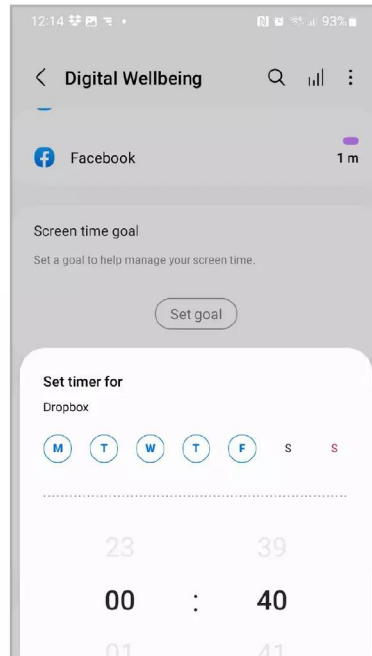
2 Open Digital Wellbeing and you immediately see a bar chart showing the total time spent on your device, broken up into sections that identify individual apps (Facebook, Google Play Store, and so on). You can tap the time in the centre to see a weekly chart of your usage.



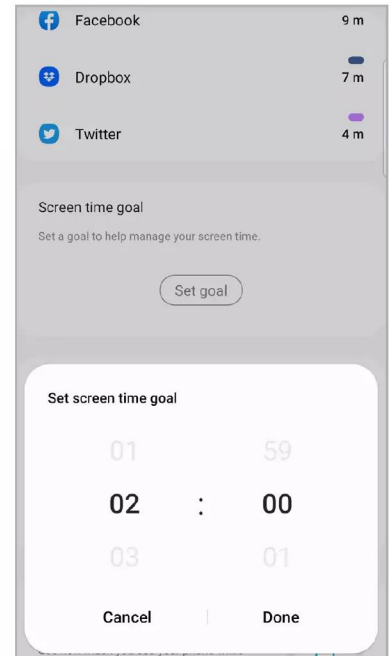
3 Tap any of the app names and you can see a daily or weekly chart of your usage. At the top of these charts, you see 'Screen time', 'Notifications received' or 'Times opened', and see different usage information. The info displayed here varies depending on the app.



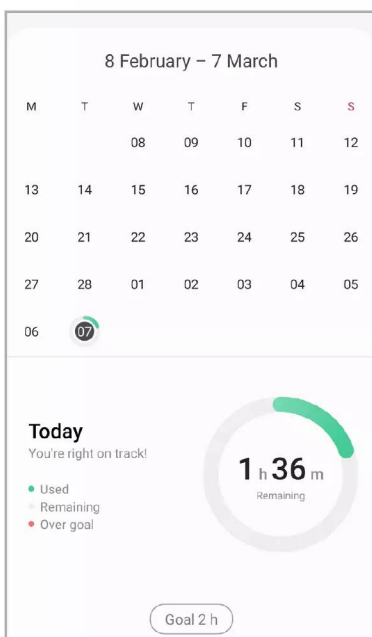
4 On the main Digital Wellbeing dashboard, tap the bar graphs icon (top right) you see a weekly report, where you're shown your average screen time over the last week, a comparison with last week's time and the three apps you used the most, along with for how long you used them.



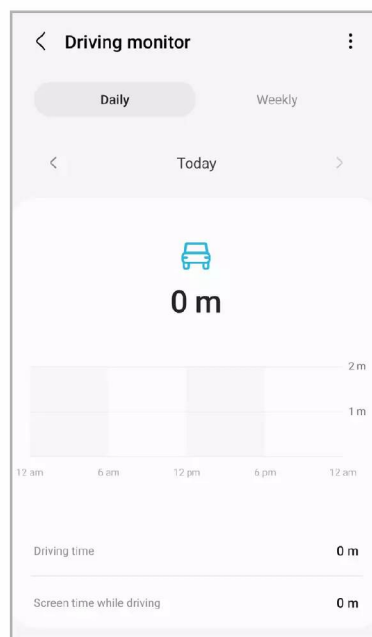
5 If you think you are using an app or app category too much, set a timer for it. On the main Digital Wellbeing page, scroll to App Timers and tap an app for which you want to set a timer. Set the maximum time for the app, and tap any days of the week you don't wish to restrict it for.



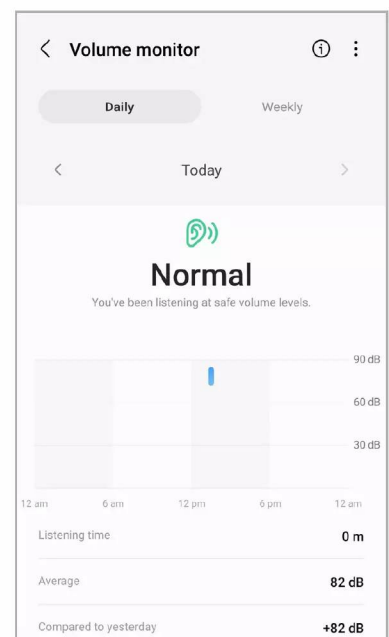
6 If you want to restrict the time you're spending per day on the phone or tablet rather than on a per-app basis, set a Screen time goal. On the main Digital Wellbeing page, tap the Set goal button, and then use the wheels to set to how long you want to restrict your device usage.



7 Now, on the main Digital Wellbeing page, the Screen time goal you set is shown. You can see how much time remains, and how much time you set overall. Tap this and you see a more detailed screen, showing this information and a calendar with how well you did on each day.



8 Scroll the main Digital Wellbeing page up to see the Driving monitor option. Tap it, and you can Monitor your screen time while connected to your car's Bluetooth and see which apps you're using the most (exclude apps such as those you use for navigation).



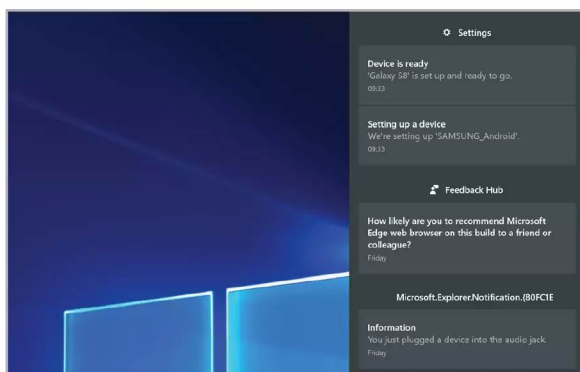
9 Further down the main Digital Wellbeing page, you see the Volume monitor. This is useful for keeping your ears safe from over-loud music. With your earbuds or earphones connected, open this section to see how loud your music is and whether this is problematic.

Transferring Files to Your Device

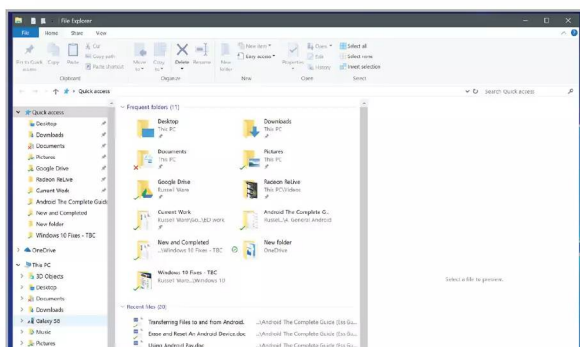
Your amazing Android phone or tablet is really just a tiny computer, so many of the file types that work on your PC can also be used on your mobile device. Transferring files to or from your PC with your device can be as easy as plugging in a data cable and then copy and pasting. However, there are several other ways of sharing files if this option is not available.

Transferring Files with a USB Cable

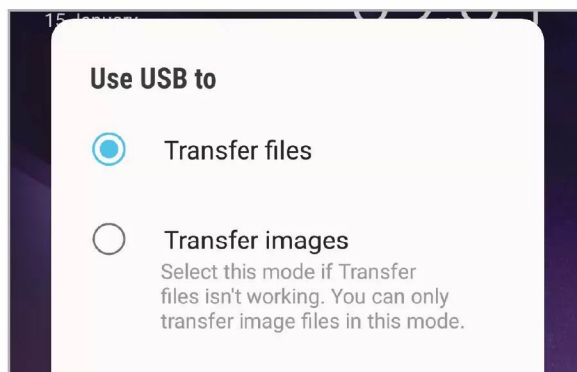
The USB cable that you use to charge your phone or tablet can also be used to transfer files between the device and a computer. Here's how to connect your mobile device to your PC and exchange files between them.



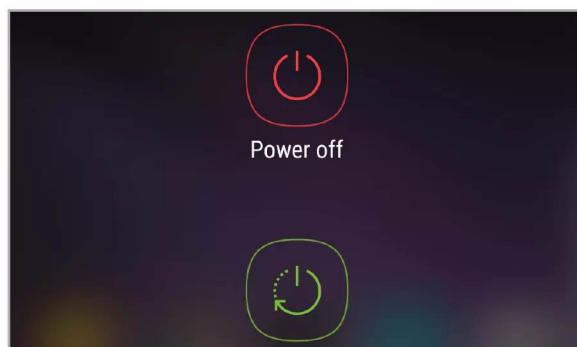
1 Connect the USB cable to your device and to a spare USB port on your PC. You may see a notification on your computer telling you that a device is being installed (USB drivers being added). Unlock your phone or tablet and check the notifications panel to see a 'Use USB for...' notification.



3 You will see various folders in whichever storage section you choose. You can now copy and paste or drag and drop files from your computer to the relevant folders on your device. For example, Music files placed in the Music folder will automatically be found by your music app on the device.



2 Select the Transfer files option and then open the File Explorer on your PC. You should now see your device listed (Galaxy S8, for example) in the This PC section of the window. Click on the device name and select either the internal storage or the MicroSD card, if you have one.



4 If you are having problems with this process, try the following: check your computer's settings to make sure that Windows automatically detects new hardware. Restart your computer and restart your device. Try a different USB cable and then try a different USB port on your PC.



Connecting Bluetooth Devices

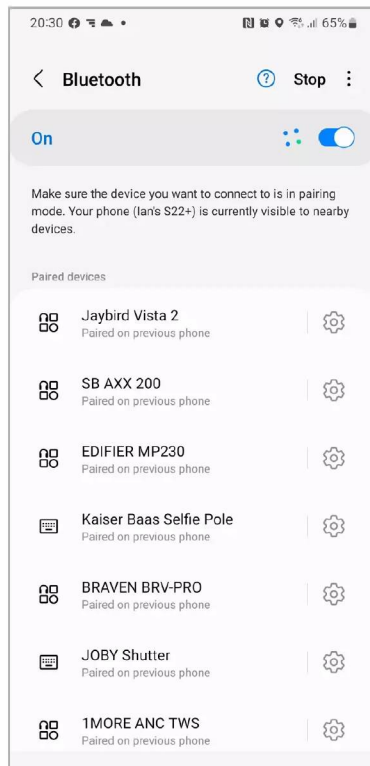
The rise in popularity and availability of Bluetooth headphones is another step towards a wire-free life and if you don't already have a pair, you probably will in the near future. Knowing how to connect Bluetooth headphones (and other Bluetooth peripherals) quickly and easily, to your Android device, is essential if you want hassle-free listening.

Pairing Your Headphones

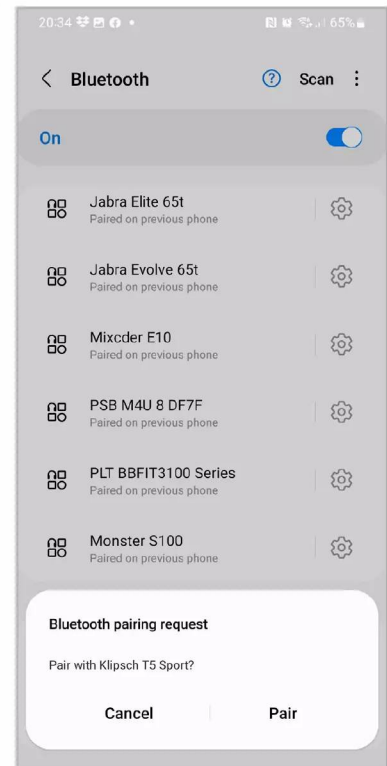
Before you can connect your headphones, speaker or other peripherals to your Android device, you need to allow the devices to connect to each other. This is called 'Pairing'. Here's a guide to doing exactly that.



1 With your Bluetooth device fully charged, turn it (or them) on, then put it/them into pairing mode (see the device's instructions if you're unsure how). You probably need to press a button for a few seconds, and normally, a blinking LED light shows the device is ready to pair.



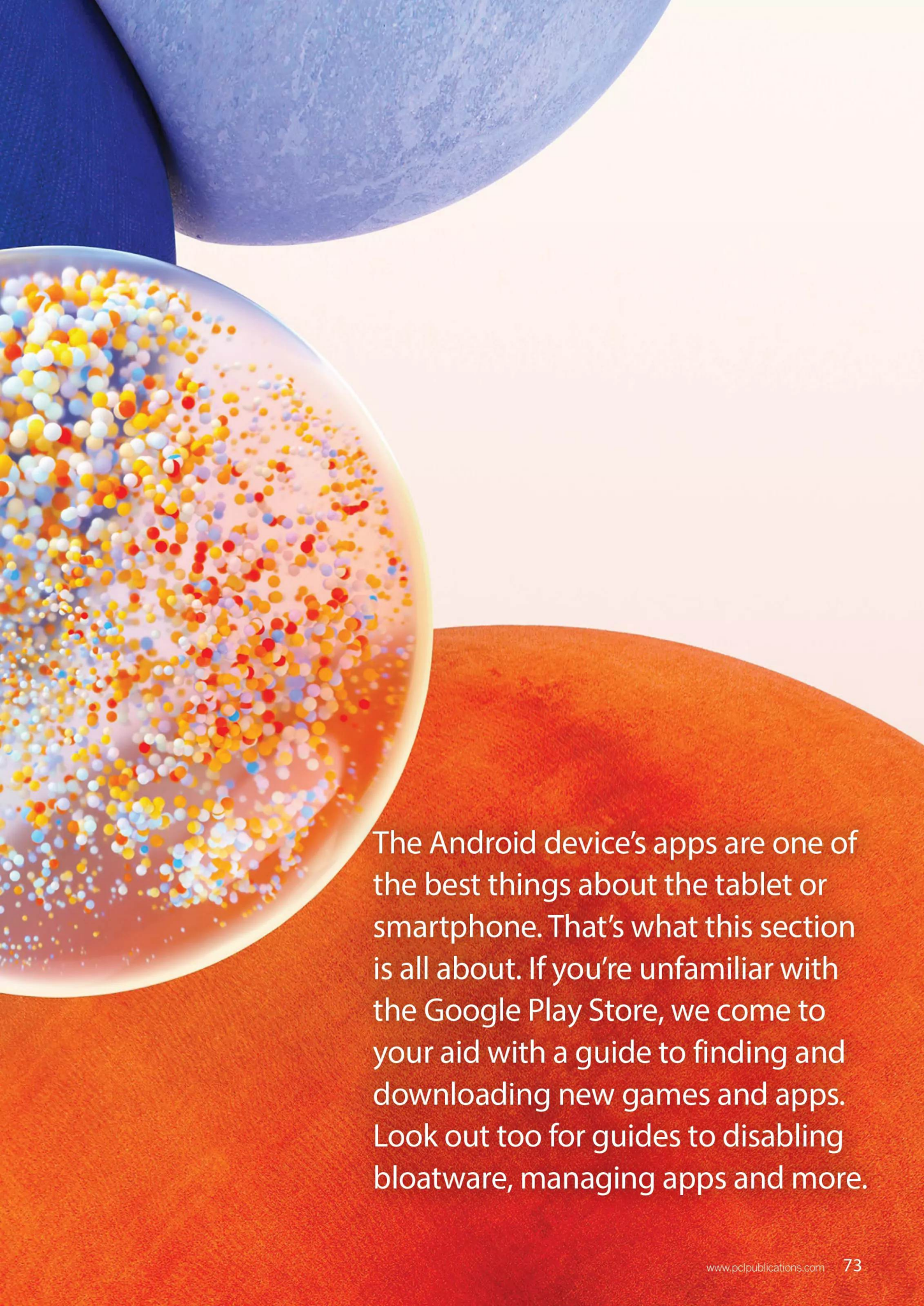
2 Now, on your Android device, head into Settings > Connections and tap Bluetooth; make sure it's switched on. Your Galaxy automatically scans for available Bluetooth devices within range, and should soon display the name of your own Bluetooth device.



3 Tap the name of your device in the list of Bluetooth devices, and tap Pair when you see the pairing request. Once you are paired, tap the name of the device again to connect. You can change what types of audio the connected device is used for by tapping the Gear icon.

Android Apps and Software





The Android device's apps are one of the best things about the tablet or smartphone. That's what this section is all about. If you're unfamiliar with the Google Play Store, we come to your aid with a guide to finding and downloading new games and apps. Look out too for guides to disabling bloatware, managing apps and more.

Find and Install Apps and Games

All of the apps and games you could possibly want are available to download from the Google Play store, from WhatsApp and Viber to Mario Kart and Clash of Clans. The Play Store app is usually found on the Home screen of new devices, but can be in the app drawer. If you want to get the most from your Android device, the Play store is the key.

Exploring the Play Store

Getting used to navigating and using the Play Store is one of the first things you should do if you're new to the Android operating system.

1 Google Play Menu

The search field is always visible when browsing any category in Google Play. Search in Apps & Games and the results are apps. If you search in Books, the results only includes books. You can also use voice search by tapping the Mic icon.

2 Account Settings

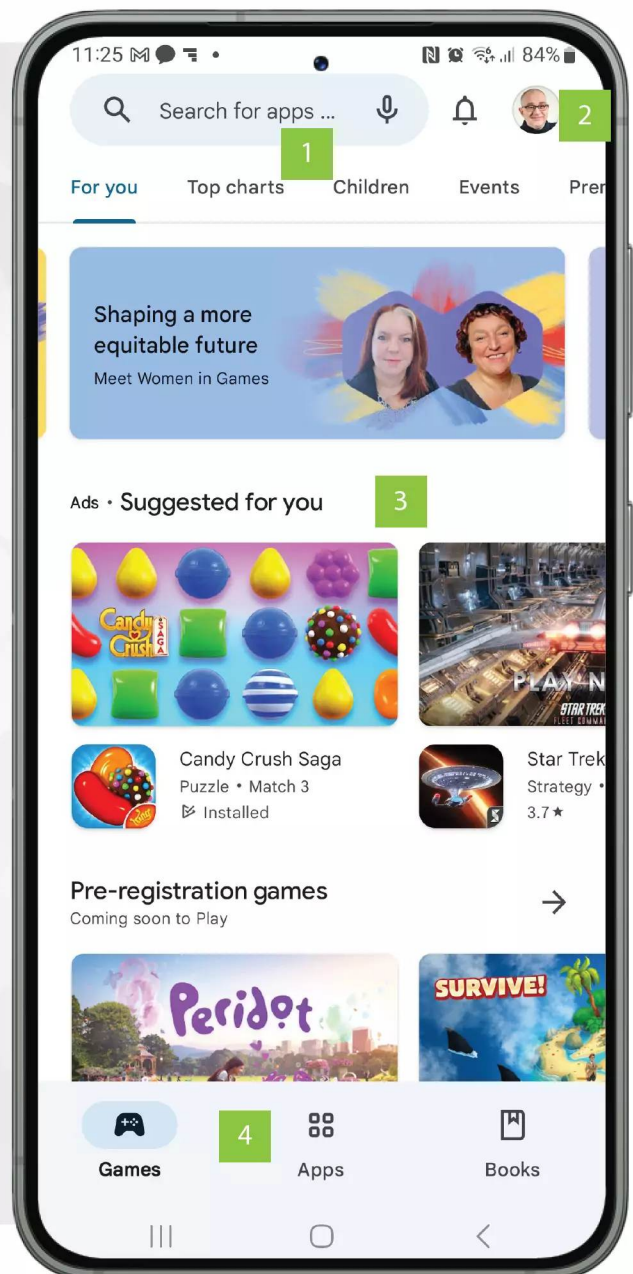
When you open the Play Store, the default screen shows apps and games recommended for you. Tap your icon here to access account settings, see your installed apps, view notifications and subscriptions, and lots more.

3 App Gallery

You can scroll down the main screen of the Play Store to see various app galleries. These range from New & Updated to apps that are specifically recommended for you personally. Scroll left or right to see more in each category.

4 Store Sections

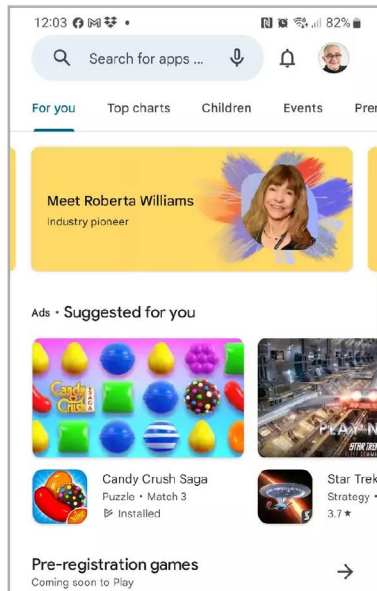
These buttons at the bottom of the screen take you to the different sections within the Play Store. These include Games, Apps and Books. You can also look for Books in its dedicated app. For films and television, use the Google Play Movies & TV app.



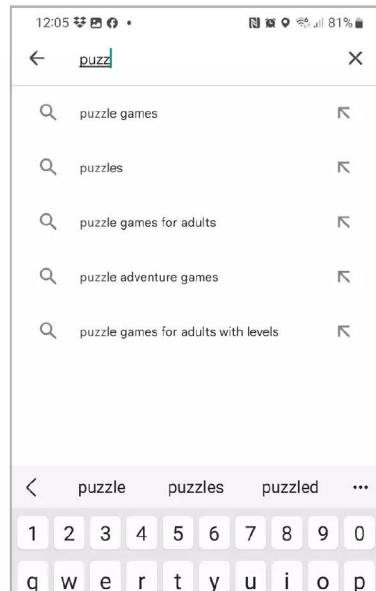


Finding Apps and Games

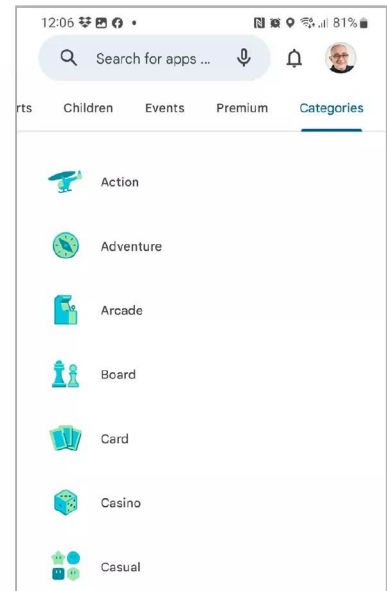
Tap the Play store icon on the Home screen, and the app opens to show the Play store main screen.



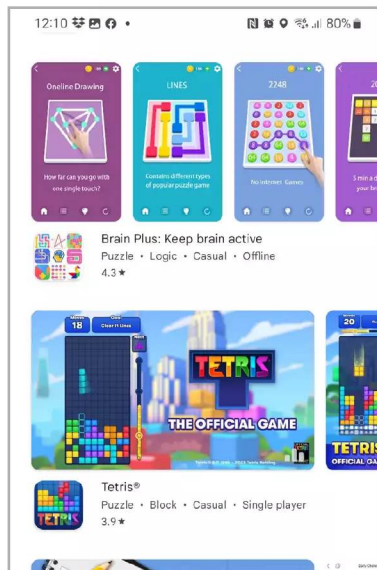
1 The first screen you will see in the app store is called For you, and contains recommendations based on usage. If you search for, and download, a particular type of app or game, similar apps and games will appear on this screen in the future. Use the tabs at the bottom to change store sections.



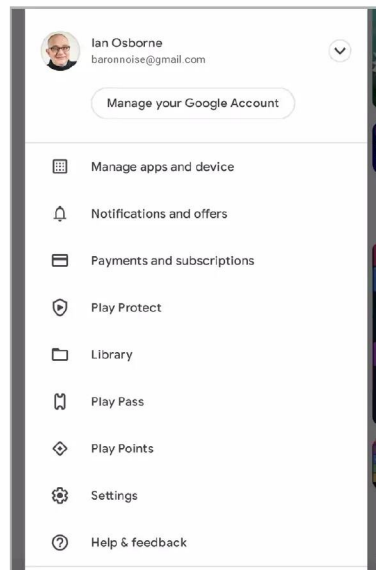
2 The search bar at the top of the screen allows you to search for apps and other content by name, if you know what you are looking for. Searching while in any of the main Store sections will return results only for that section; searching in Books for example just shows books in the results.



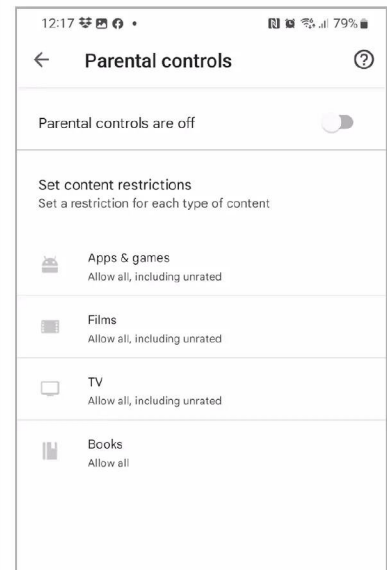
3 If you want to browse all available apps of a specific type, tap the Categories button in the scrolling menu at the top of the screen. Choose the category you want to browse from the list. You can also choose one of the promoted categories from this same scrolling menu.



4 Scroll down the main page of the app store and you will see recommendations, offers, and other content available. As you begin to install apps, this will change, reflecting your previous choices and offering recommendations. You can scroll any of these sections left and right to see more.



5 Tap your account button at the top left to see your account information. Here you can manage your apps, your device and your notifications, check on your payments and subscriptions, access your Library, Play Pass, Play Points and more. Tap the button to Manage your Google Account too.



6 The Play Store menu also gives you access to the settings; letting you control things like Notifications, Download preferences, Auto-update settings and Parental controls. You can also allow biometric authentication for Play Store purchases, and check the build version.

Using the App Information Screen

There is a lot of information to be found here, from the number of downloads and screenshots, to user reviews and permissions.

1 App Title and Rating

At the top is the name of the app, along with the developer's name (tap to see more from that developer) and the PEGI suitability rating. You can also see the user rating, out of five stars, and the approximate number of downloads an app or game has had.

2 Install/Purchase

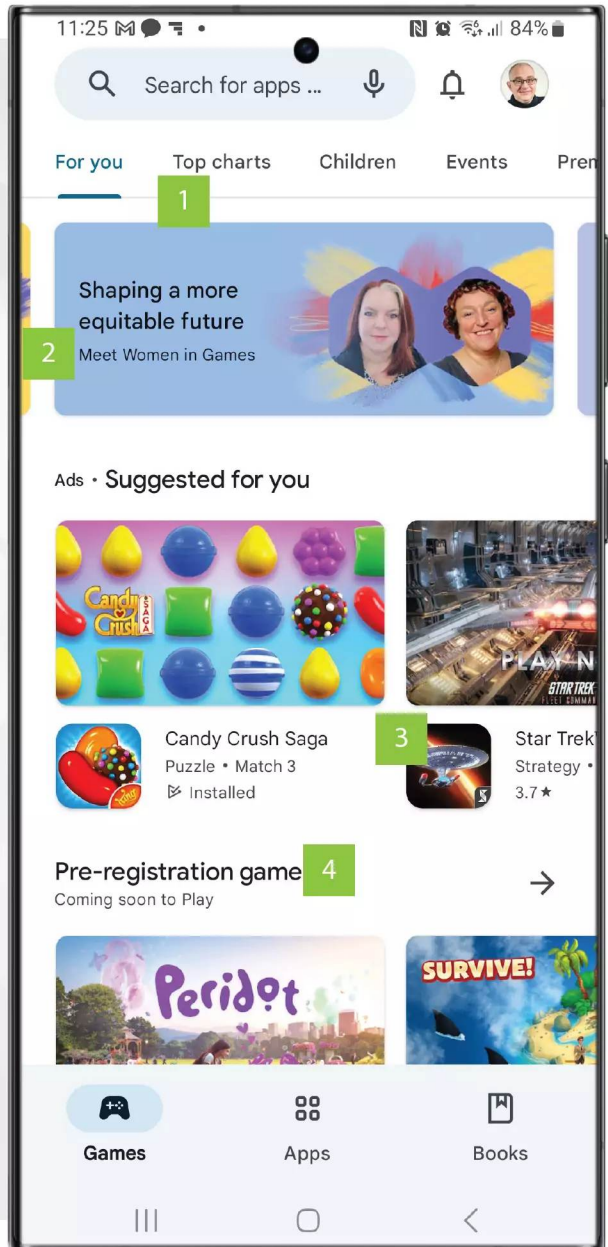
Tap the Install button to begin the installation process. You will have a chance to confirm or cancel the installation. If the app is a premium (paid) app, this button will show the price and then tapping it will open the payment method confirmation window.

3 App Screenshots

Here you can view images and videos of the app, letting you further explore what the app does before installing. Scroll the images to the left to see more. Tapping on any of the images or videos will open them to full screen, so you can view them better.

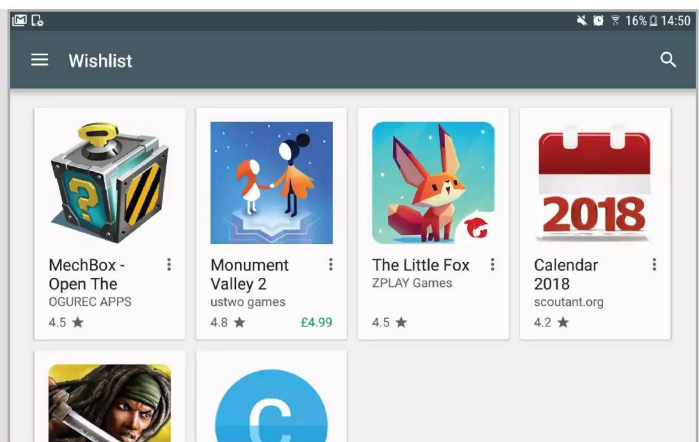
4 App Description

All apps and games should have at least some sort of description, letting you read more about what an app or game does. Below this, if you scroll down, are app user reviews, developer contact details and recommendations of similar apps you might like.



Create a Wishlist

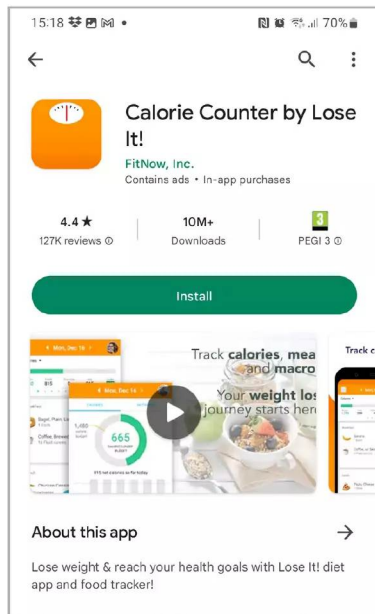
> The Google Play Store allows you to add apps and games, along with other content, to a Wishlist. You can add items to the list by tapping the small Menu icon at the top right of the app info screen. You will then be notified if an item on your Wishlist changes. You can view your Wishlist at any time by tapping the Menu button at the top left and selecting Wishlist.



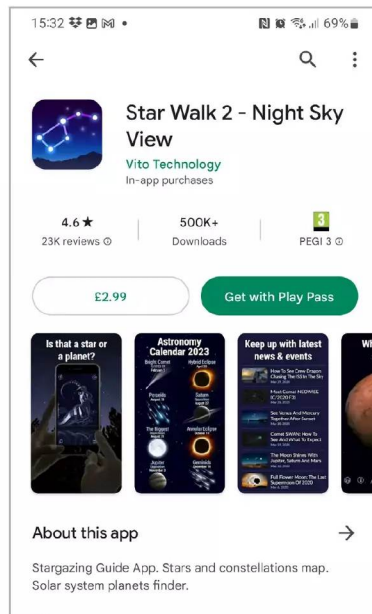


Installing Apps and Games

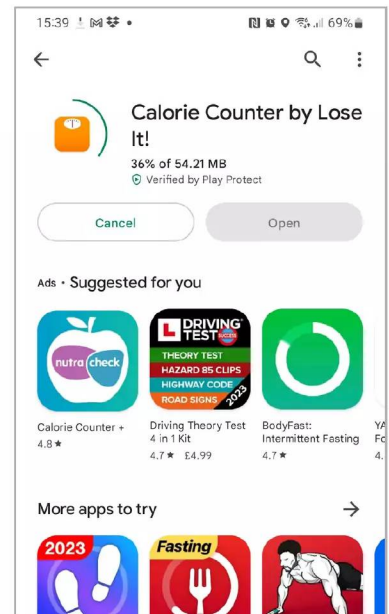
Installing apps and games is fairly easy and only really varies depending on whether the app is free or paid for.



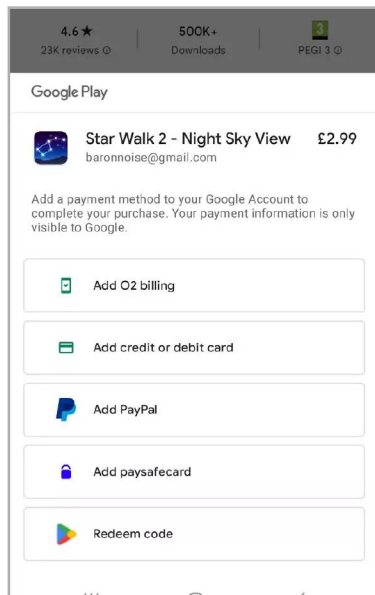
1 When you find an interesting app, tap the thumbnail to open the info screen. Everything you need to know about the app can be found here, from download statistics and screenshots, to user ratings, reviews, and similar app suggestions.



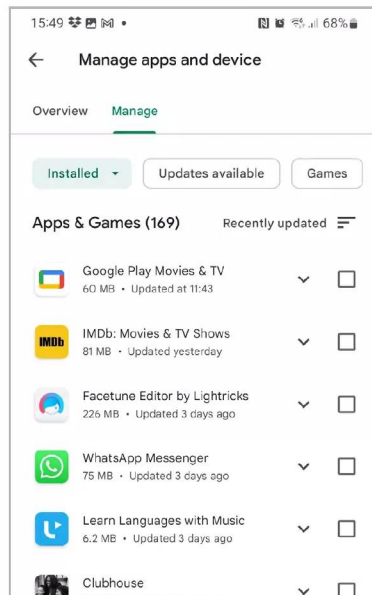
2 Free apps will have an Install button while paid apps will have a button displaying the price in your regional currency. After tapping the Install button, you will be shown the Permissions the app requires. These will vary from app to app. Tap Accept.



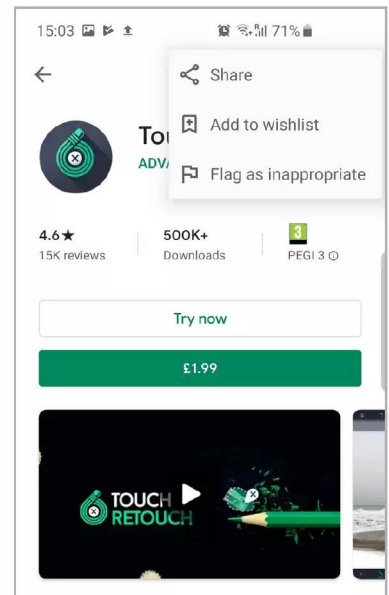
3 The app will now download and automatically install on your device. The button on the app info screen will then change to say Open, allowing you to try the app straight away. An Uninstall or Refund (if a paid app) button is also added to the screen.



4 If the app is a paid or premium app, after the Permissions screen you will need to enter your Google account password to authenticate the purchase. If you don't have a payment service set up, you will be asked to add one before you can continue.



5 It's easy to see which apps you have installed from within the Google Play Store. Tap your account button, then Manage apps and devices, then tap the Manage tab. This not only shows you the apps you have installed but all apps you have downloaded.



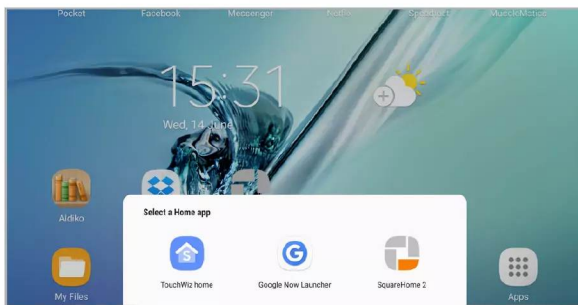
6 We all make mistakes and if you download a paid app and decide that you have made a mistake, as long as you act within 2 hours of purchase, getting a refund is easy; just go to the app screen in Google Play and tap the Refund button.

Manage Your Installed Apps

As you add apps to your Android device, it becomes increasingly important to be able to manage them properly. The tips and tricks in this section introduce you to, amongst other things, the Application Management screen of your Android device, as well as showing you how to disable pre-installed apps and get problem apps working after a fault. Let's take a look at how to do it.

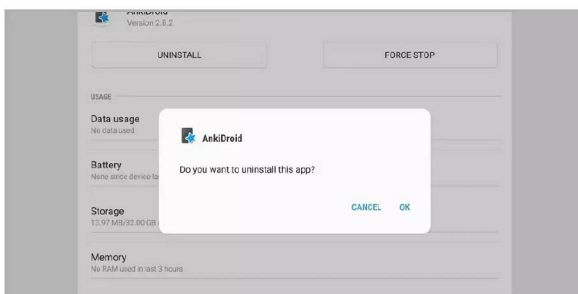
Android App Management

The app management options have changed slightly over time, so some older devices, or those running older versions of Android, may have fewer options than shown here. This tutorial gives you a good overview.



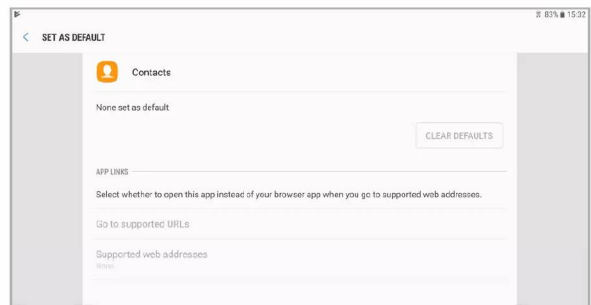
Set App Defaults

There are many apps available on Google Play that provide the same or similar functions to your phone or tablet's built-in tools. When you install one of these apps and then use a particular function it provides, Android will give you the option to make it the default app for that function.



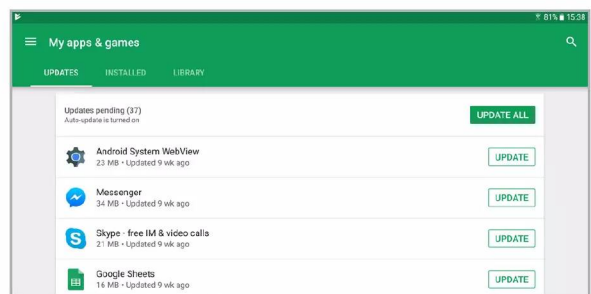
Removing Apps

Most apps take up just a few MB of space but if you wish to remove an app, the process is simple. Head to Settings > Applications > Application Manager. Select the app you wish to remove and then tap Uninstall. You can also remove apps by dragging them to the trash in the app drawer.



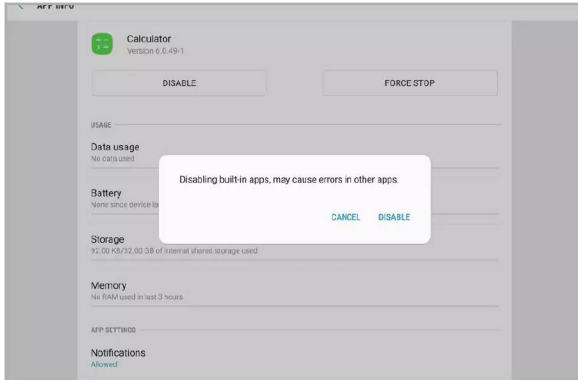
Reset App Defaults

If, for any reason, you decide that the default app you have chosen is not the one you want to use all the time, you can easily remove its default status. Go to Settings > Applications > Default Applications, here you can choose the function you want to alter and then choose the app to assign to it.



Check for App Updates

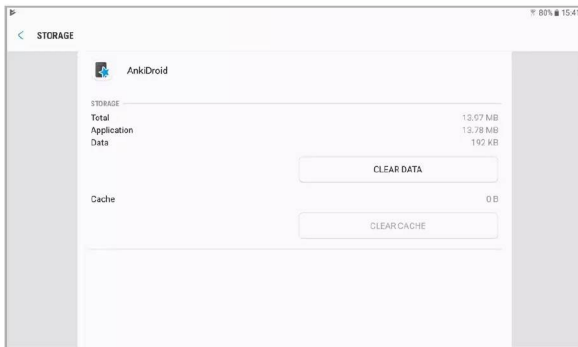
If you have tried clearing the cache and data, and the app is still not working properly, it is worth checking to see if there are any updates available for it. Open the Play Store and tap the Menu button. Select My Apps from the menu and check if the problem app has Update next to it.



Disable Stock Apps

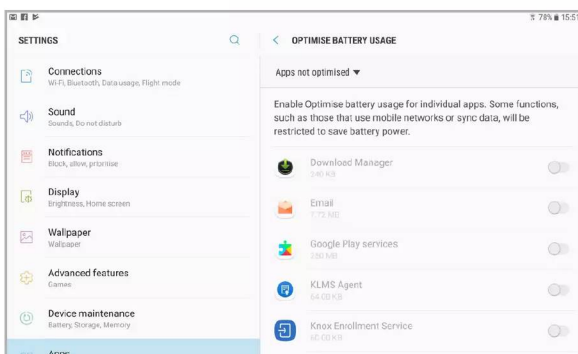
Newer versions of Android (Jelly Bean onwards) give you the option to disable apps that came preinstalled on your device.

Head into the Application Manager and select the app you want to disable. You will see that if there is not an Uninstall button, there is a Disable button instead.



Move Apps to SD Card

You can save space on your smart device by moving apps to your microSD card. Obviously, you will need an SD card inserted. Open the Application Manager, tap on the app you want to move, and then either tap Move to SD or tap Storage > Change > SD Card. System apps cannot be moved.

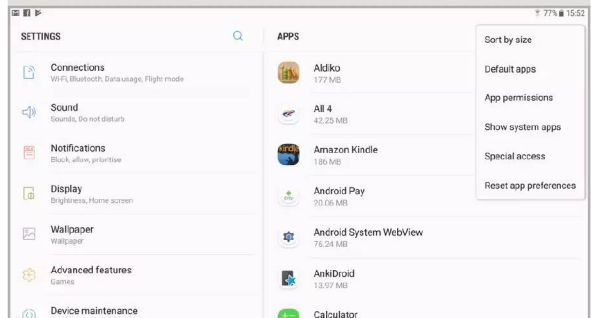


Special Access

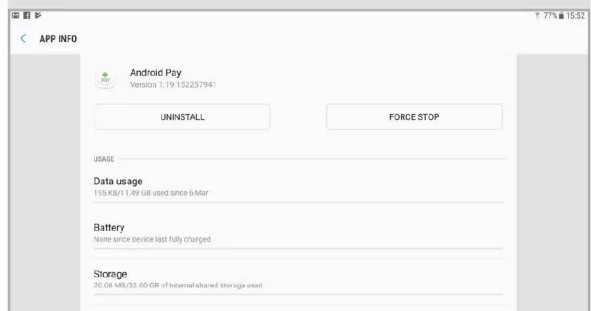
Depending on your Android device, you might be able to manage apps based on special access settings. Open Settings > Apps and tap the More button > Special Access. You can then set things like battery optimisation and Do Not Disturb settings for certain installed apps.

Fix Problem Apps

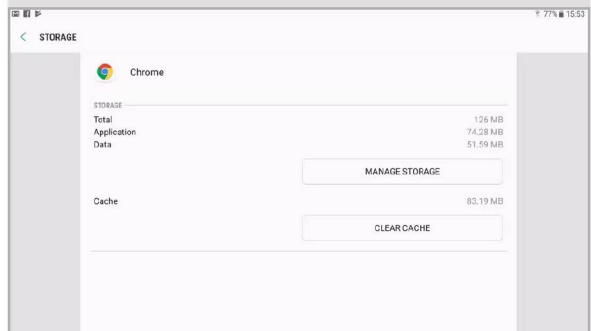
From time to time you might find that an app is not behaving as it should. You might see an error message pop-up on screen or you might not. Sometimes an app just won't seem to open.



1 Go to Settings > Applications > Application Manager and select the Enabled Apps tab at the top of the screen. Find the problem app in the list and tap on it to see the Application Info screen. You will then see several different things to try to get the app working.



2 You can try the Force Stop. This sounds worse than it actually is. It simply forces the app to stop running. You can then try running the app again to see if it works properly. You can also try Clear Cache before you retry the app. This removes files and data that the app has stored.



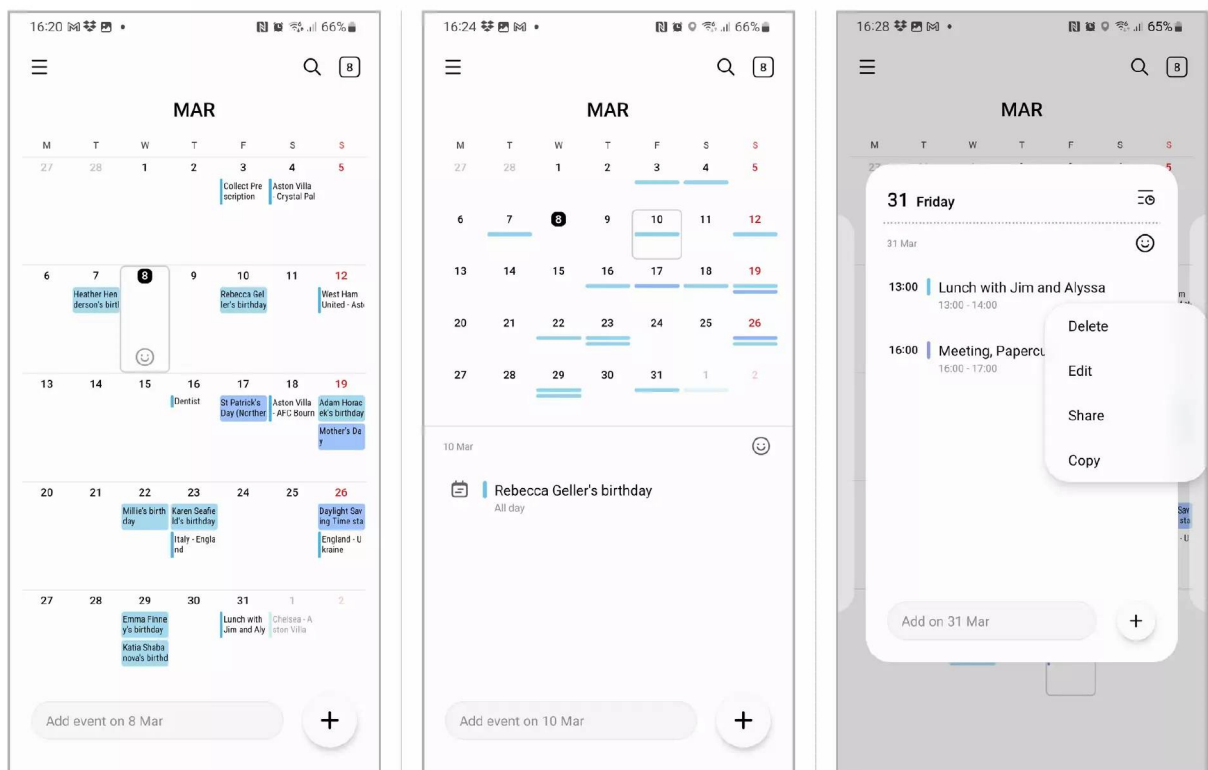
3 Your third option is Clear Data. This is more drastic (for the app) than clearing the cache and will remove stored password and settings. The fourth button on the App Info is self-explanatory. If nothing else has helped, Uninstall the app and then download it again.

Plan Events and Tasks with Calendar

Although there are lots of good calendar apps available for Android devices, using the one included on your Android device ensures integration with several other stock apps. The interface is simple to use and you can even sync to an existing Google Calendar if you wish. It is also powerful enough to be used as the main and only productivity and planning app on your device.

Calendar View

You can easily change the view displayed by the app to suit your own needs or requirements, editing options such as which calendars are shown and which is the default view. Here's how to go about it in the Calendar app.



1 When you open the Android device's Calendar app you should see the default month view screen. The current day will be highlighted, and any known events or tasks will have a coloured line or label beneath the date. Tap the three-lines icon at the top of the screen to change to year, week, day or task view.

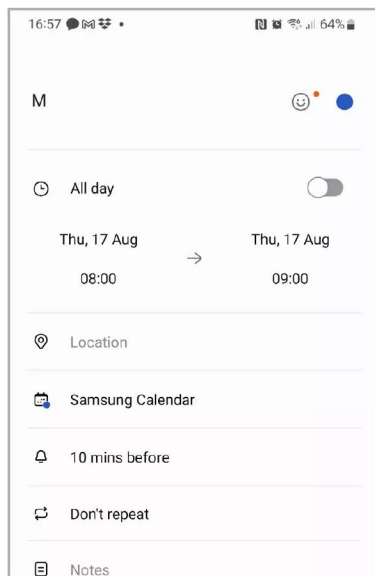
2 For most users, month view is the most useful but even this can be customised. Drag up from the bottom of the screen to reduce the size of the calendar and show information for the date selected below, up again to reduce the calendar to showing the current week, and down to go back again.

3 With the calendar in full screen mode, events and tasks will display on the dates with a small label. Tap any date with a label to see a pop-up containing more information. You can touch and hold on any event in this pop-up window to see further options for it, e.g. Delete, Edit and Share.

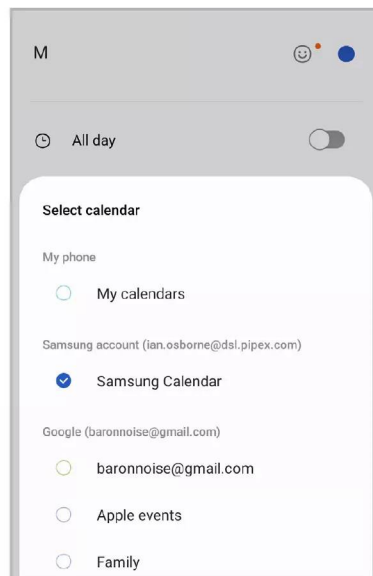


Create and Manage Events and Tasks

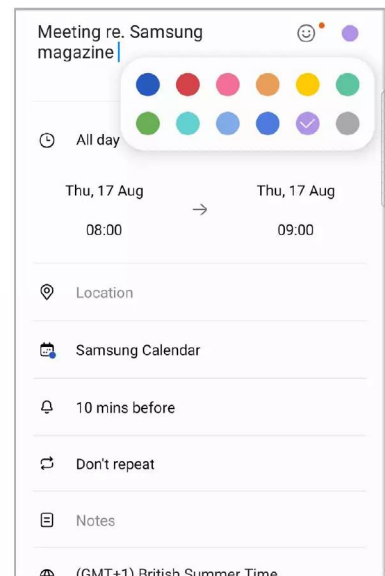
The Calendar app is powerful enough to be used as a fully-fledged event planner or to-do list maker.



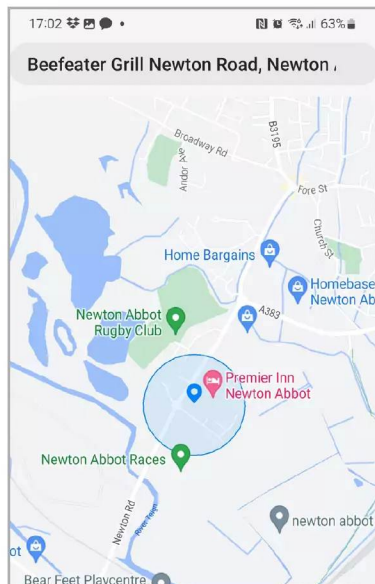
1 To add a new entry on the calendar, first scroll to the date you want to edit. You can do this by swiping your finger left and right across the screen to change months. You can now either double-tap on a date or tap the circular plus button at the bottom of the screen to begin a new event.



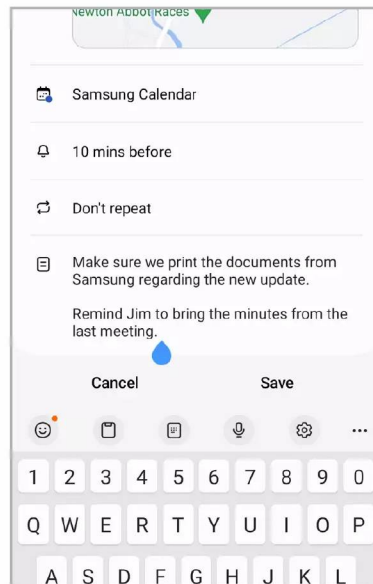
2 The first thing to do is choose the calendar where you want to save the event by tapping the Select Calendars section. You can have several different calendars displayed at any one time (including Google Calendar) or choose to show them all combined by selecting My Calendars.



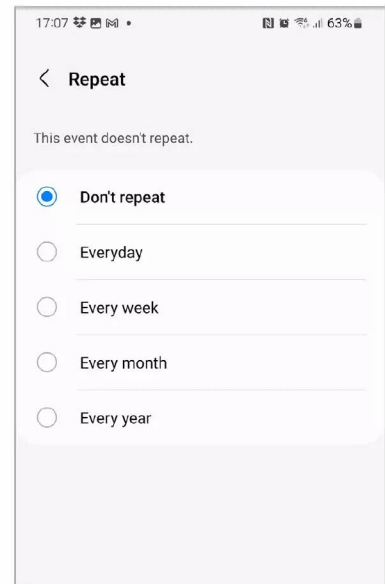
3 You can now enter a name for the event, assign it a colour by tapping the coloured circle, apply a sticker to it and choose a time for the event. The time you choose is when you will see a notification on your device alerting you of the event. Tap the alarm section to choose when the alert sounds.



4 If you need to be reminded of where the event is taking place, you can add a map to the alert. Calendar will ask to access Location Services if this is not already enabled. You can deny access, and find the location manually, by scrolling or searching on the map that appears.



5 The notes section lets you turn a simple event reminder into something a bit more expansive, allowing you to include additional information in the alert when it arrives in your notifications. You can also set an event to repeat daily, weekly, monthly, etc. if you need it to.



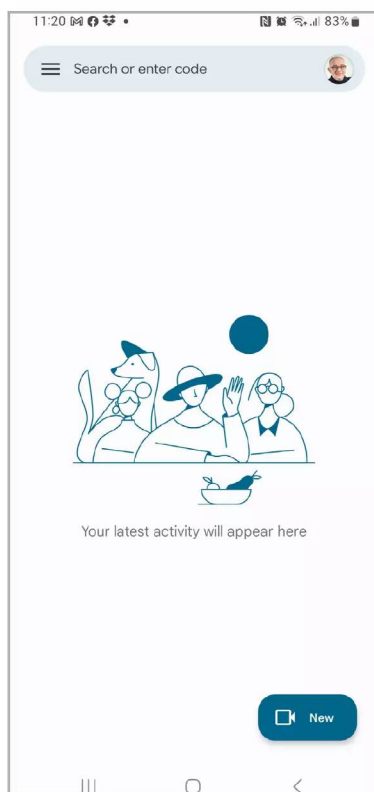
6 For regular events, tap 'Don't repeat' and you can choose to have the event occur at the same time every day, week, month or year. Tap the time zone at the bottom of the screen to change this. If it's an all-day event, tap the switch marked 'All day' at the top. When finished, tap Save.

Chatting with Google Meet

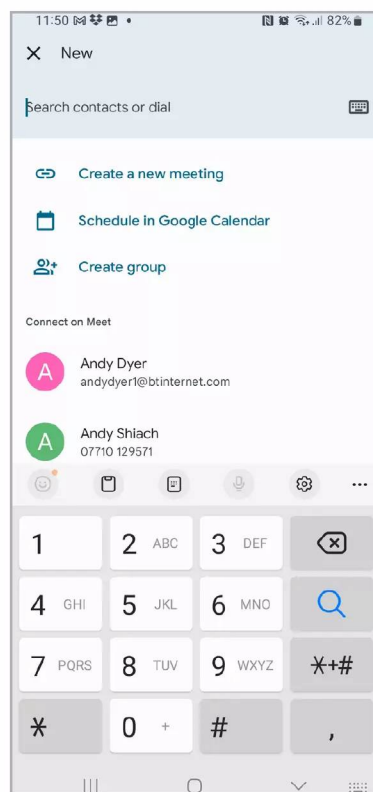
Video calling is the next best thing to being with someone in person but too often it can be a frustrating experience. You shouldn't have to worry about whether your call will connect or if your friend is using the same type of device. That's where Google Meet comes in. The successor to the popular Google Duo video chat app, Google Meet allows two or more people to make audio and video calls with a resolution up to 720p. With our help, you can keep in touch over the Internet.

Set Up Google Meet

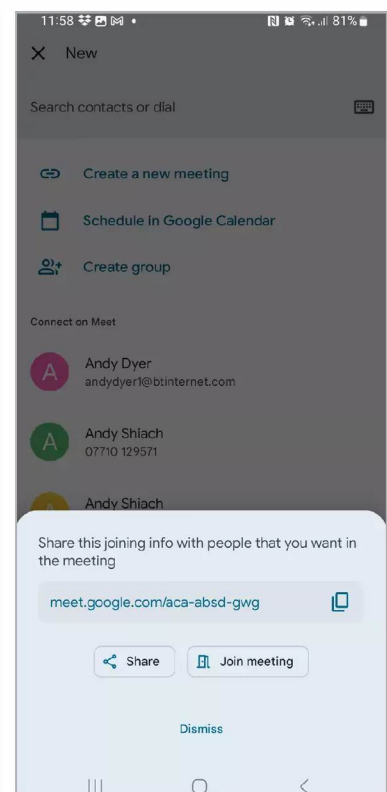
You can initiate a Google Meet call directly from the Google Meet app, or through Gmail or chat, and also schedule a meeting through the Calendar app. Here's a guide to setting up a Google Meet on your Android device.



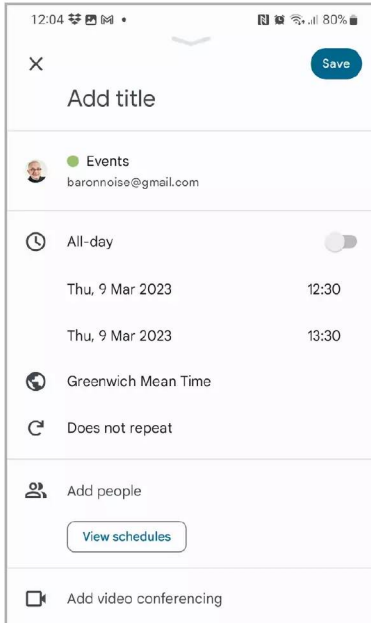
1 Open the Google Meet app. The first screen shows your latest activity, which will of course be blank when you first use the app. If you've been sent a code with which to launch a Google chat, put it in the top field here. Otherwise, tap the New button (bottom right).



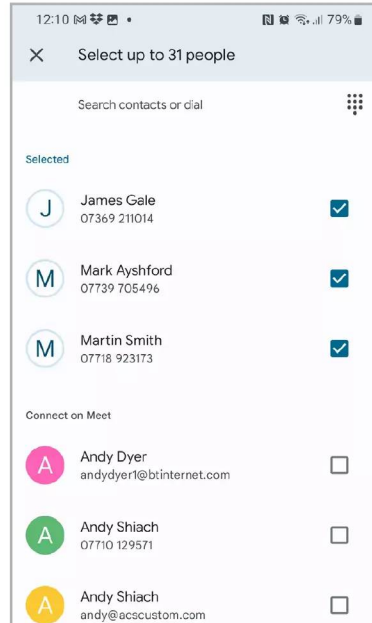
2 On the next screen, you can search your Contacts app using the field at the top of the screen, or dial a number directly. Tap the icon in the right of the search field to toggle the keyboard and dialer. Other options offered here are to create a new meeting, schedule a meeting or create a group.



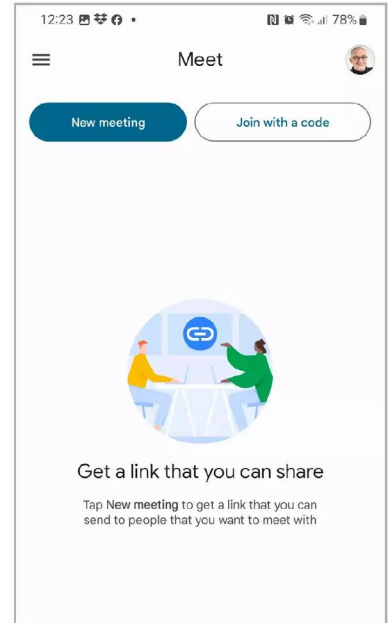
3 Tap the Create a new meeting link and you're given a joining code, which you can share using the Share icon, using Messages, email and more. Tap the pages icon next to it to copy it to your clipboard. You can join the meeting from this window too.



4 To schedule with Google Calendar, first install Google Calendar then use the link. Set the time and the date for the meeting, and tap Add People to add one or more guests. Tap Save at the top of the screen when you're done, and you can opt to notify your guests.



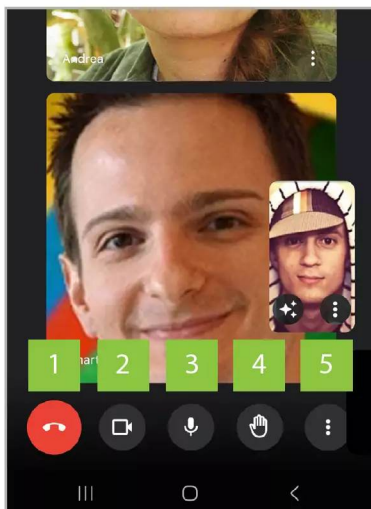
5 Tap the Create group link and you can scroll through, or search, your contacts, adding a person to your group by tapping the box to their right. When you've added as many people as you wish to the group, tap Next at the foot of the screen to proceed with sharing the group link.



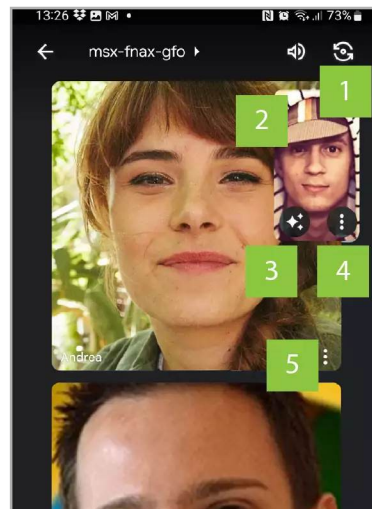
6 To launch a Google Meet from Gmail, open the app and tap the video camera icon at the foot of the screen. You're taken to a screen from where you can tap New meeting for a sharable code, or Join with a code if you've been sent one yourself and want to get into the meet.

Chatting on Google Meet

After opening or joining a Google Meet video chat, these are the controls you can use during the conversation.



1 During a video chat, the main controls at the foot of the screen are: (1) End call; (2) Disable camera; (3) Disable mic; (4) Raise your hand, which places a hand icon on your feed – very useful for meetings; (5) Opens a menu for options such as screen sharing, settings, etc.



2 The icon (1) changes between front and rear camera. You can move your own feed (2) anywhere on the screen simply by dragging it there. The icons on your feed are (3) Add effects, and (4) a menu with options regarding your feed. (5) gives options regarding those feeds.



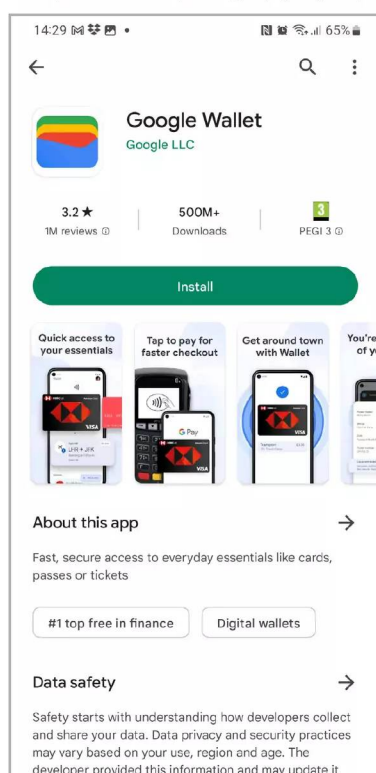
3 When using Google Meet, the people you're chatting to don't have to be on a Android device, or even an Android phone. You can download the Google Meet app on iOS too, and if you're on a desktop or notebook computer, you just need a Chrome, Firefox, Microsoft Edge or Safari browser.

Using Google Wallet on Android

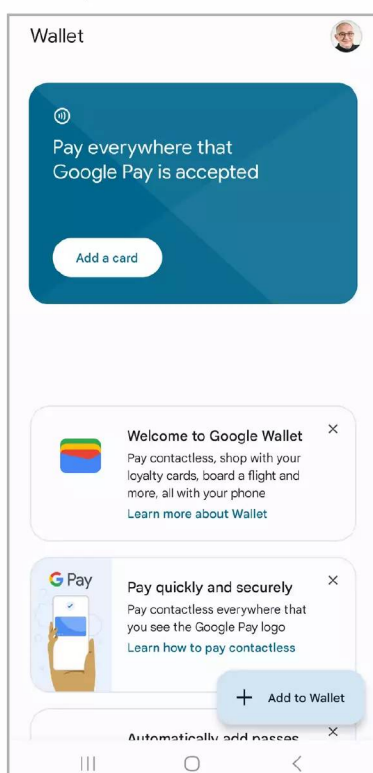
You already use your phone for just about everything. Now you can make payments with it too. Just add your credit, debit, loyalty and/or gift cards to Google Wallet and start shopping in stores, in apps and online. Google Wallet can be used at hundreds of thousands of shops around the world, wherever contactless payments are accepted, and it's quick and convenient too.

Setting Up Google Wallet

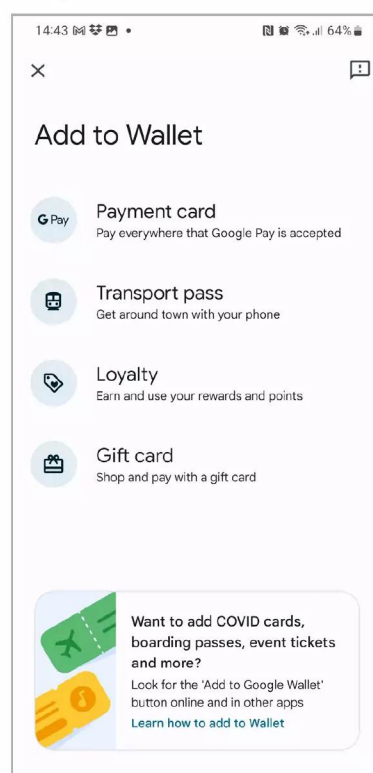
Google Wallet is a secure system, but as with anything to do with money and payments, it is important to make sure that you set everything up properly. With our help, it's not difficult to do. Here's how to go about it.



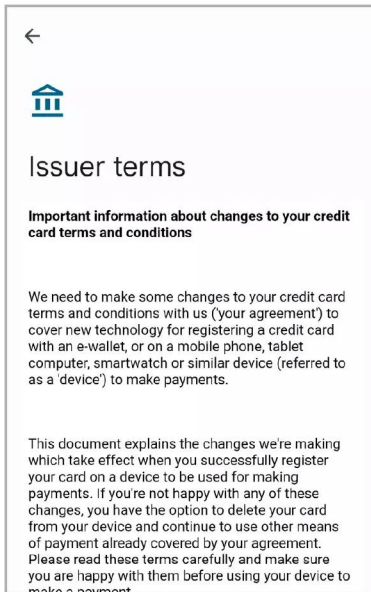
1 You make sure you have all the credit and debit cards you wish to register close at hand, and have all the details available (account numbers, sort codes, security numbers, etc.). You also need to download the Google Wallet app from Google Play, if you don't already have it.



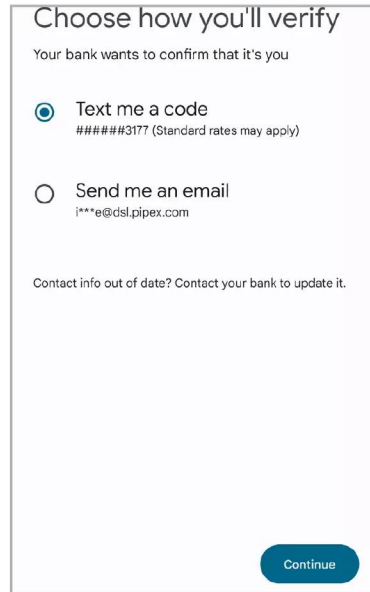
2 Once installed, tap the App icon and get started. If you have more than one Google account, choose the one you want to use with the app. If you already have a credit or debit card registered to your Google account, it will be displayed along with the option to add a different card.



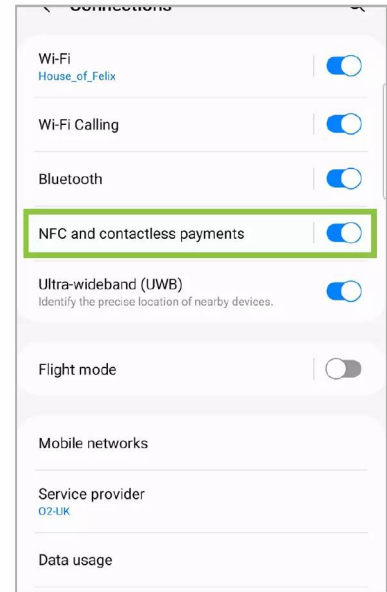
3 Tap Add to Wallet and choose a type of card to add. You now have to add information, including security information (we can't show a screenshot of this process, due to a security feature that prohibits the information being captured). Follow the on-screen instructions then accept the terms.



4 Accept the terms and conditions. If you don't already have a screen lock set up, you need to do this now for an additional level of protection. It's a good idea to set the screen lock delay to zero. In some cases, small purchases can be made even when the phone is locked.



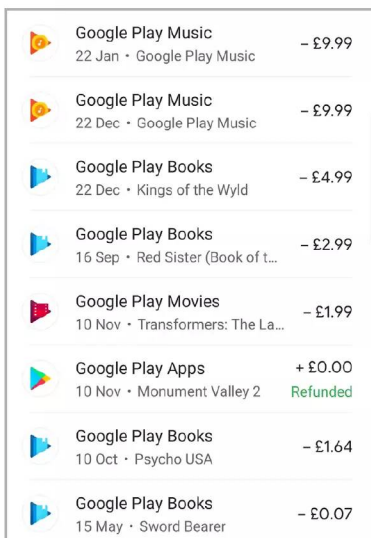
5 The next step is to verify your card with your bank. In some cases, you need to make a phone call. The number should automatically be entered into your phone dialler. Alternatively, choose a text message or an email, if these methods of verification are available.



6 If you don't already have NFC and contactless payments switched on, open the Settings app, tap Connections and tap the switch next to the 'NFC and contactless payments' option. You're now ready to pay for goods and services using Google Pay on your phone.

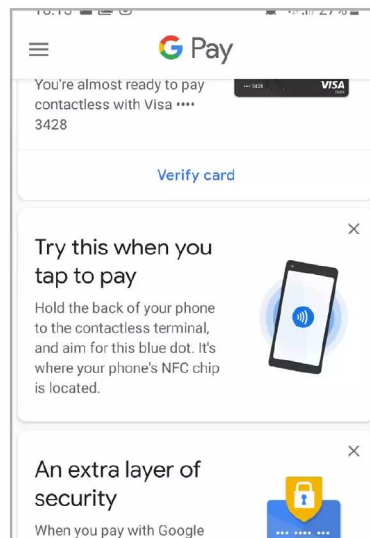
Security and Advantages of Google Pay

Google Pay is not only secure, it also makes shopping easier, whatever it is you're buying.



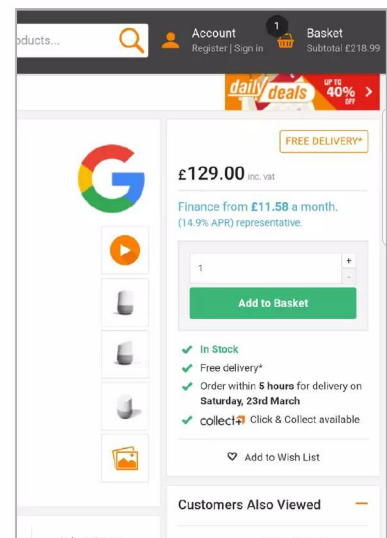
Purchase Tracking

➤ As soon as you make a purchase, you'll see a payment confirmation that shows you exactly where a given transaction happened, along with the merchant's name and number. This makes it very easy to catch any suspicious activity early.



Tokenisation

➤ When you use your phone to pay in stores, Google Pay doesn't send your actual credit or debit card number with your payment. Instead, it uses a virtual account number to represent your account info – so your card details stay safe and secure.



Simple App Checkouts

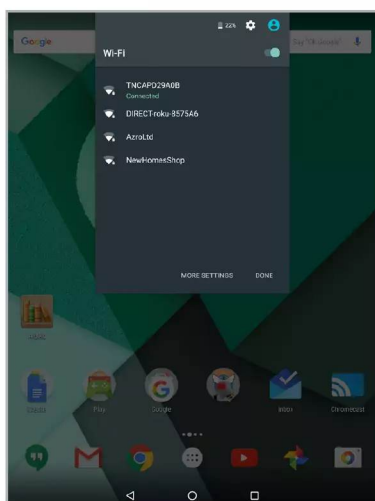
➤ Google Pay makes it easy to check out in apps and online. There is no need to enter your card details every time you buy something. When you're shopping in your favourite app, just choose Google Pay (if available) at checkout and save yourself some time.

Navigate with Google Maps

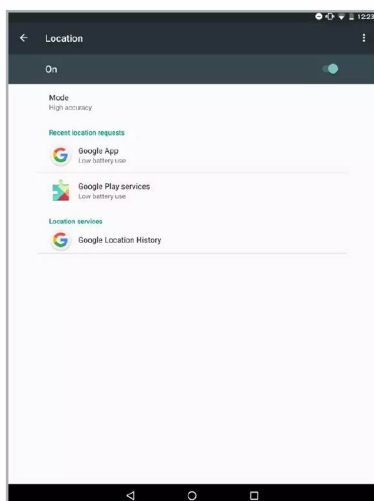
Google Maps is a fantastic tool but it can often be overlooked by Android users in favour of the seemingly more exciting features their device offers. Maps is much more than just a way to find out where you are; it can help you find hotels and restaurants in the local area, show you a list of local plumbers, or act as a satellite navigation tool.

Set Up Google Maps

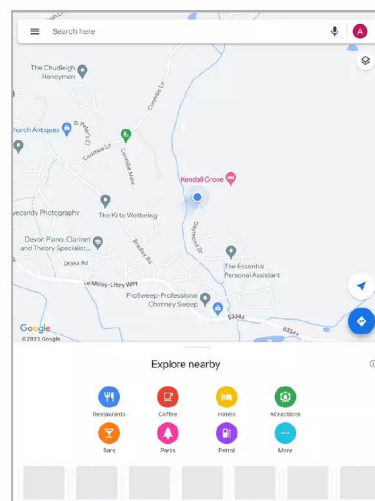
Before you can use Google Maps on your Android device, you need to ensure a few other services are activated. These may vary, depending on where you are trying to use the app. Here's how to go about it.



1 Because Google Maps uses Live data you will almost always need to be connected to the Internet to use it to its full extent. So the first thing you need to do is connect to a Wi-Fi network or, if you are out of range of a Wi-Fi network, connect to a mobile data network such as 3G or 4G.



2 To take full advantage of all of the features of Google Maps, you will also need to ensure that Location Services are enabled and that the GPS feature of your device is on. You can use maps without these features turned on, but the information shown will be much more basic.



3 Now that you have a connection and location tracking is on, you can go ahead and open Google Maps. Give the app a few seconds and it will pinpoint your location and zoom in to show it on screen. You are now ready to start using Maps to find places and navigate your way to them.

Saving Maps Offline

If you're going where the Internet is slow, mobile data is expensive, or you can't get online; you can save an area from Google Maps to your phone or tablet and use it when you're offline.

On your Android device, open the Google Maps app and make sure you're both connected to the Internet and signed in to your Google account. Search for a place, such as San Francisco, at the bottom: tap the name or address of that place and then tap Download. If you searched for a place like a restaurant, tap the More button and then tap Download offline map > Download.



The Map Screen

You can view your maps as either simple line drawings or as a satellite view showing much more detail. The simple version is often easier to use when navigating, but the satellite view shows more detailed information.

1 Maps Menu

Tap this to open the main menu in Google Maps. Within the menu you will find links to Your Places which shows previous searches etc., maps which have been saved for offline viewing (more on that later) and to enable the different map layers.

2 Search Maps

You can search for both locations, towns, cities, landmarks etc., and specific businesses or types of business. When you tap the search bar, a list of previous searches, routes and locations will open, allowing you to pick one again.

3 Map Icons

As you scroll around the map, you will see various icons marking places of interest, restaurants, train stations and many other things. You can tap any of the icons to see more information in the panel at the bottom of the map screen; tap on or drag the panel up.

4 Saved Location

You can save important locations in the Maps app, your home and work addresses for example, and these will be added to My Places. To do this, drop a pin (tap and hold on map) and then click the Save option. You can add the location as a Favourite, Starred Place or a location you Want To Go.

5 Current Location

You can use the Maps app without having Location services switched on but if you use it with location enabled, you will see a small blue dot at your current location. If the GPS signal is good enough, this may even show the direction you (or your device) is facing.

6 Find North

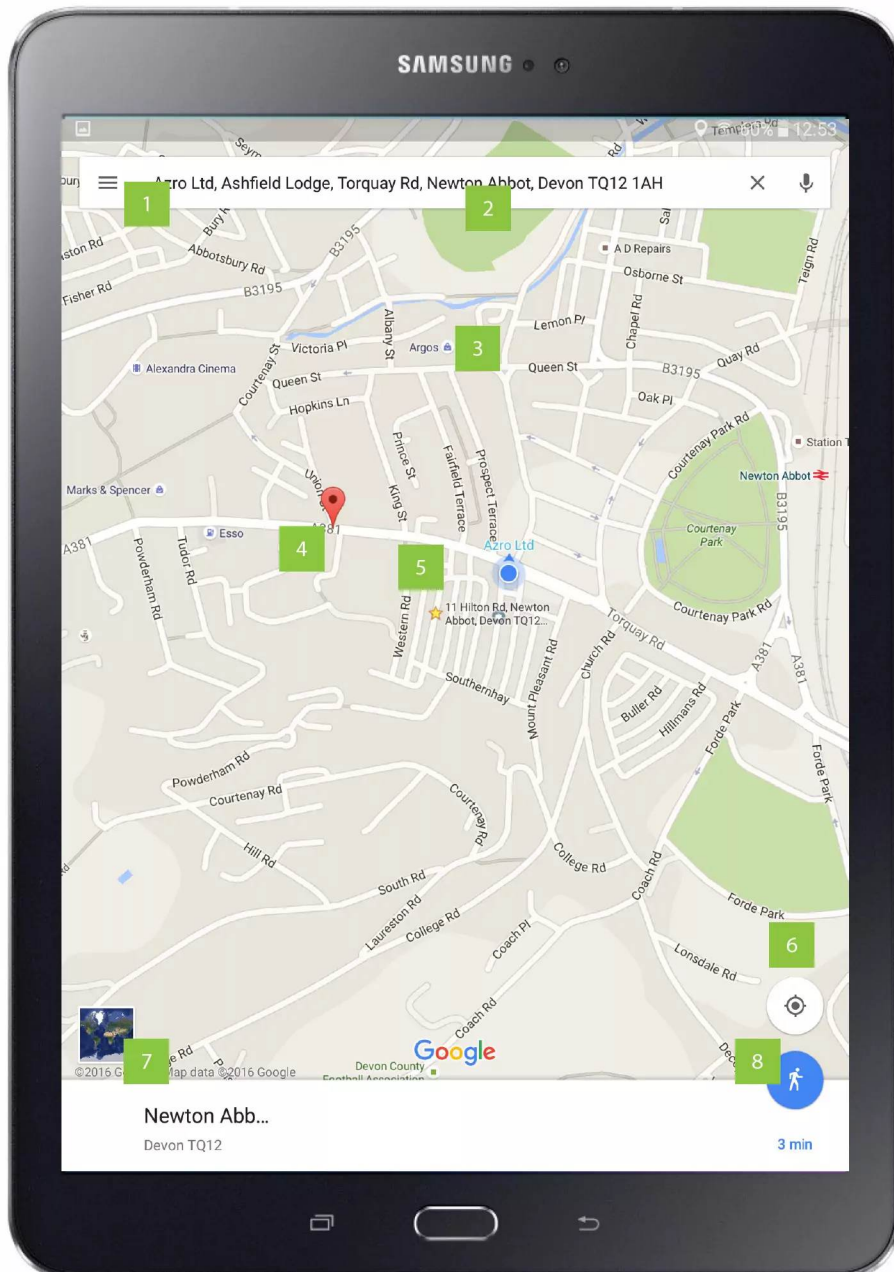
This is the compass showing you at all times which direction you are facing. You can tap the Compass button at any time to find North. The map view will rotate until it is aligned with North and you can then match it up to the compass.

7 Info Panel

When the map is focused over a town or city, the information panel will show data about that location: bars, restaurants, etc. Tap or drag the panel up to view the info. If you tap an icon or set a pin in the map by tapping a location, the info panel will show details about that location.

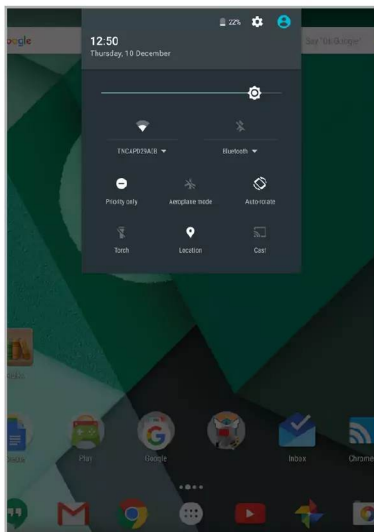
8 Find Route

This is the button you tap to start planning a route and using the navigation tool. If you have a pin in the map, tapping this will find a route between your current location and the pin. If you tap it without a pin a new screen will open where you can enter start and finish points.

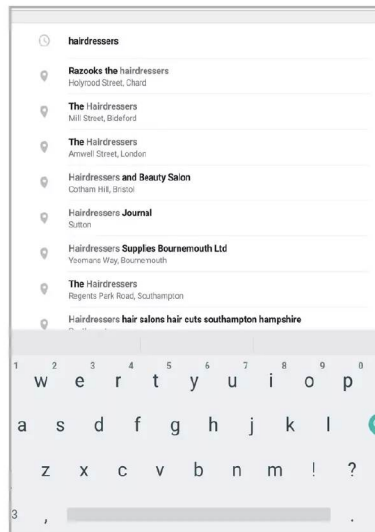


Local Search

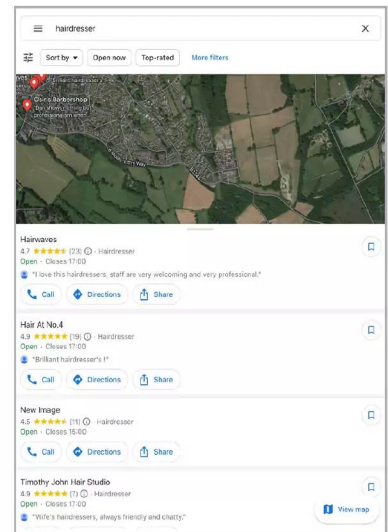
You can use Google Maps to find people, places and businesses in your local area. It's great for finding places to visit.



1 Turn on Location, connect to Wi-Fi and open Google Maps. The local search feature also works using just your 3G or 4G connection which is easier on your battery but isn't quite as accurate.



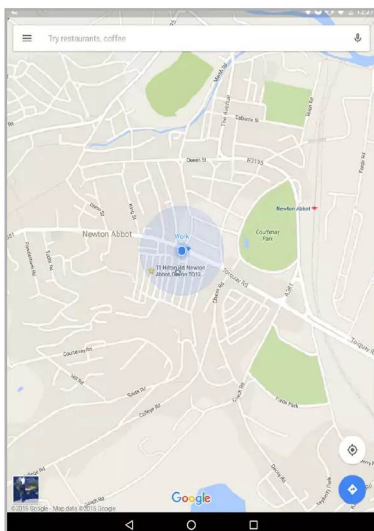
2 From the main map screen tap in the search field and type what you want to search for. You can search for specific businesses or just type something like "hairdressers" to see all in that area.



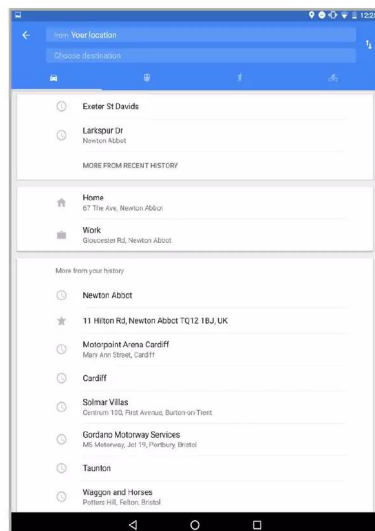
3 Results relevant to your search will now be shown on the map. The bottom half of the screen contains a list of those locations, along with a button to quickly load directions to each one.

Navigating with Maps

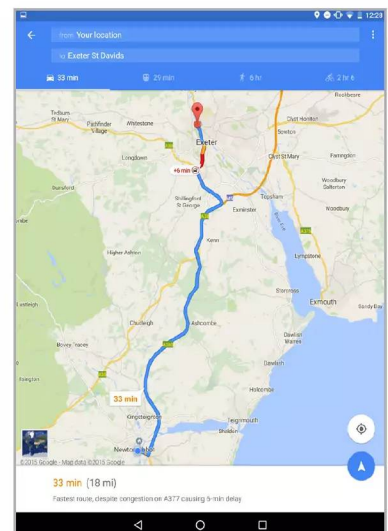
Let Google find your current location, enter a destination and then follow the directions shown on the screen.



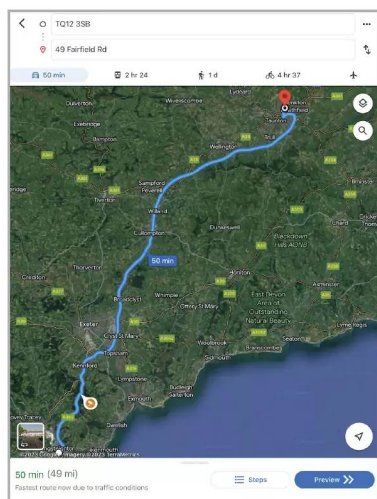
1 Ensure that GPS, Wi-Fi and optionally, a data connection are enabled and open Google Maps. Let the GPS pinpoint your current location. If you are indoors the GPS may struggle to find a satellite, so give the app a bit of time.



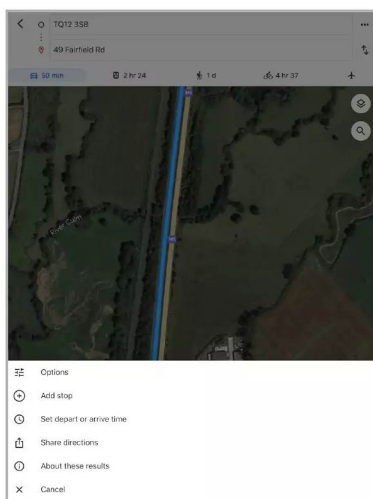
2 Press the blue Directions button, that looks like a road sign, located on the bottom menu. Type in your destination and starting point, if not your current location and then touch the Get Directions button. Enable Navigation if asked, first use only.



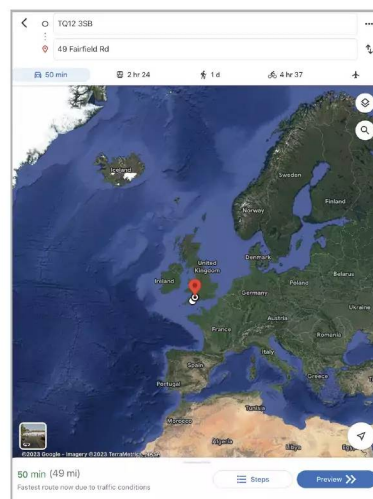
3 If you have searched for anything in maps before now, you will see a list of your location history on this screen. Tap any to select a previous destination. Once the route is plotted tap the Navigation button at the bottom of the screen.



4 The map view will now change and you can now use your device in exactly the same way as you would a standard Satellite Navigation system. Clip it somewhere you can see it and start driving. You can buy car holders for almost any sized Android device fairly cheaply.



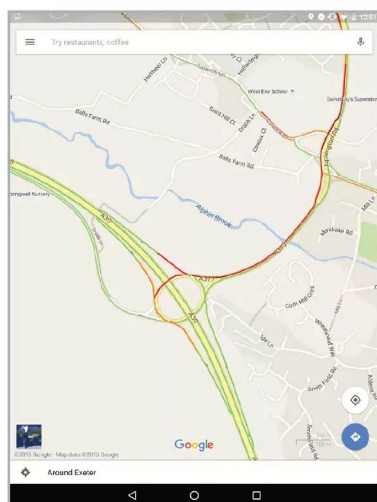
5 While in Navigation mode press the Menu button to see options to mute the voice directions, check the overall route, change map layers (see traffic or a satellite view, for example) or exit Navigation. You can tap the Mic button to record the audio directions if you wish.



6 At any time whilst navigating you can zoom and slide the map around to suit your needs. To quickly centre the map on your current location again, tap the Recentre button at the bottom. To view an alternative route tap the split arrow button at the bottom of the map screen.

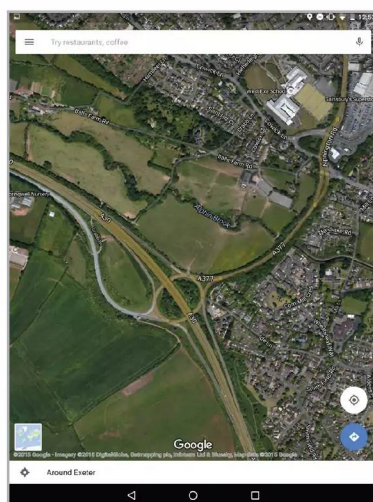
Map Layers

There are several different ways that you can view the map in Google Maps, from basic block colours to full satellite image, to the on-the-ground street view. To see the available different layers tap the Menu button in the app.



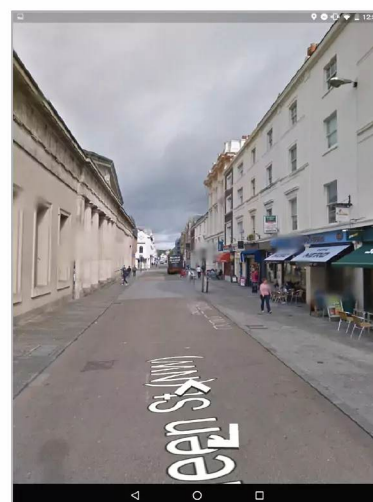
Traffic

There are several different ways that you can view the map in Google Maps, from basic block colours to full satellite image. To see the different layers available tap the main Menu button in the app (top left of the screen). Some other apps you can install on your device will add available layers, including Google Earth but there are also some standard layers.



Satellite

This changes the map view from block colour to a full satellite image. You can zoom in to the satellite image as you can with the normal map and the level of detail captured is impressive. You can overlay any other layer onto the satellite view. If you are using a data connection to view Maps, bear in mind that viewing the satellite view will use more data and may cost more money.



Street View

To see Street View on the Google Maps app, press and hold on the map to drop a pin. You can then pull up the info sheet to learn more information about that specific location, find directions, check out Street View and save or share the location by text or email. When in Street View simply tap the Back button on your device to return to the maps view.



Doing More With Android



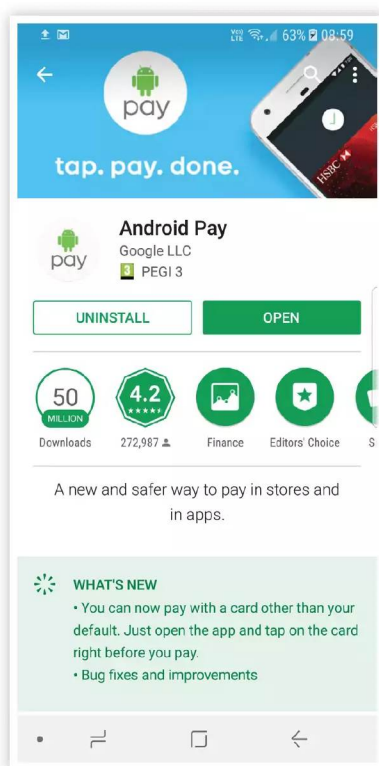
Our advanced and expert guides will introduce you to launchers and troubleshooting techniques, show you how to access advanced developer options, monitor your system from problems and change how the OS works! Android is so much more than messaging and looking online, find out over the page...

Using Android Pay

You already use your phone for just about everything, so why not use it to pay for stuff too? Android Pay lets you do just that. Just add your credit, debit, loyalty and gift cards to Android Pay and start shopping in stores, in apps and online, all using a secure and convenient system. Android Pay can be used at hundreds of thousands of shops around the world, wherever contactless payments are accepted.

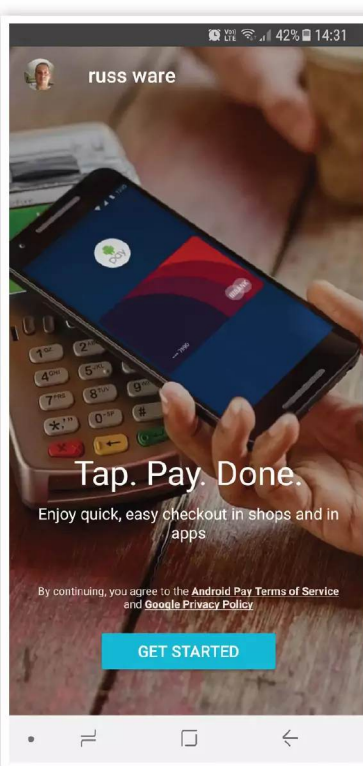
Setting Up Android Pay

Android Pay is a secure system but as with anything to do with money and payments, it is important to make sure that you set everything up properly.



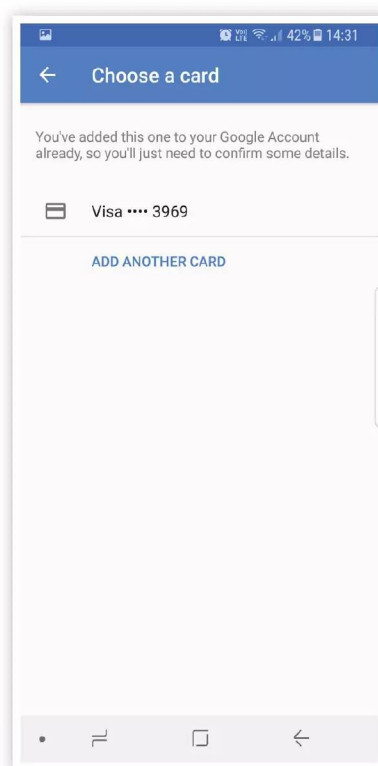
1

You will need to make sure that you have your credit or debit cards close at hand and have all the details available: account numbers, sort codes, security numbers, etc. You will also need to download the Android Pay app from Google Play, if you don't already have it on your phone. Setting up Android Pay can take a little time, mainly due to the security questions and settings.



2

Once installed, tap the app icon and then Get Started and choose the Google account to use with the app (if you have more than one). If you already have a credit or debit card registered to your Google account it will be displayed next, along with the option to add a different card. If you don't already have a credit card attached to your Google account, you can add one later.



3

Whichever option you choose, you will have to add information, including CVC codes and other security information: we can't show a screenshot of this process, due to a security feature that prohibits the information being captured. Be careful to add the exact information required. Complete the information requested and accept the terms.



Screen lock for Android Pay

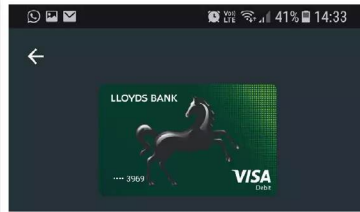


You have a screen lock, so you're good to go.

Since your phone can be used to pay when it's unlocked, you might want to change how quickly it locks in [settings](#). For your convenience, you may be able to make some smaller purchases while your phone is locked. [Find out more.](#)

4

If you don't already have a screen lock set up on your phone, you will need to set one up now, for an additional level of security on top of the app security. It is a good idea to set the screen lock delay to zero. In some cases, small purchases can be made even when the phone is locked.



Verify your card

Choose a method to verify through your bank

Call your bank
03456034335

Not seeing your current info? Contact your bank to update it.

Virtual account number

Visa **** 6709

5

The next step is to verify your phone with your bank. In most cases, you will need to call a number specifically for Android Pay verifications but this can vary between different banks and card issuers. The number should automatically be entered into your phone dialler. Call and follow the instructions.



Turn on NFC to pay in shops

You won't be able to pay with your phone in shops while NFC is off.

NFC lets your phone communicate with the payment terminal and other NFC-enabled devices. You can turn it off at any time in your phone [Settings](#).

[TURN ON NFC](#)

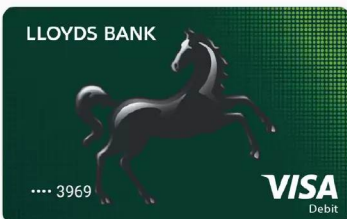
6

Once verified, the last thing you need to do to start using contactless Android Pay in stores that offer the service, is to enable NFC. NFC, or Near Field Communication, allows your phone to communicate with the contactless terminals. Either turn it on here or turn it on in your main settings menu.

Security and Advantages of Android Pay

Android Pay is not only secure, it also makes shopping easier, whether you are buying a loaf of bread at your local supermarket or the latest fashions online.

DEFAULT CARD



Your guide to getting started
Learn how to pay with your phone



Visa Tap & Win
Use Android Pay for a chance to win

You're ready to start using Android Pay



You can use it wherever you see these symbols



Purchase Tracking

Once you've made a purchase, you'll see a payment confirmation that shows you exactly where a given transaction happened, along with the merchant's name and number, making it easy to spot any suspicious activity.

Tokenisation

When you use your phone to pay in stores, Android Pay doesn't send your actual credit or debit card number with your payment. Instead it uses a virtual account number to represent your account info, so your card details stay safe and secure.

Simple App Checkouts

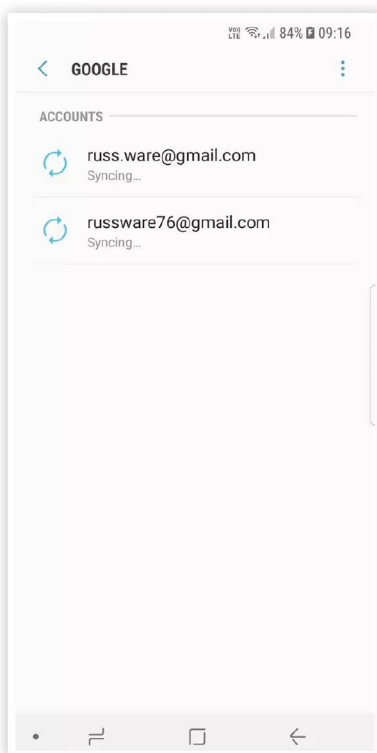
Android Pay makes it easy to check out in apps and online. There is no need to enter your card details every time you buy something. When you're shopping in your favourite app just choose Android Pay (if available) at checkout and save yourself some time.

Erase and Reset an Android Device

You can remove data from your Android phone or tablet by resetting it to factory settings. Resetting this way is also called 'formatting' or a 'hard reset'. A factory reset is useful if you're trying to fix some persistent issues or are planning to sell or give away an old device and want to make sure that everything of yours has been removed.

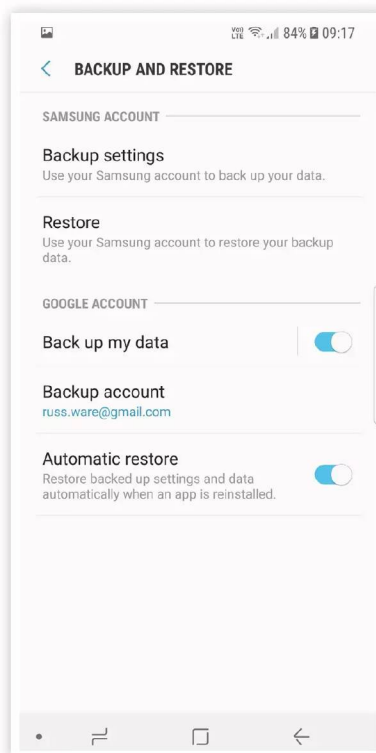
Preparing to Reset

Before you reset and wipe your device you need to make sure that you understand and are prepared for what you need to get back up and running afterwards.



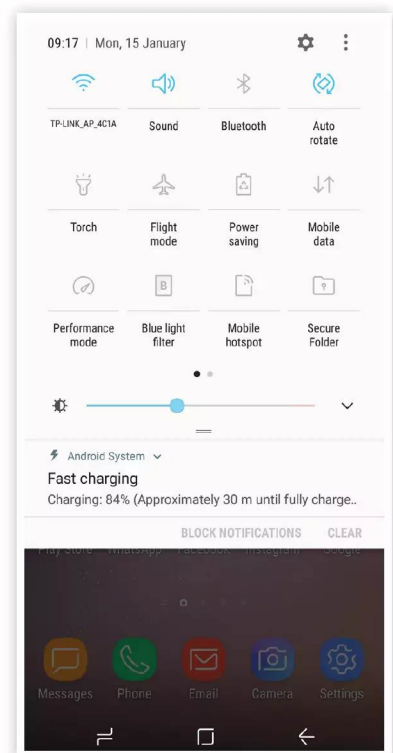
1

To show that it's you doing the reset, you'll need to enter security information. If you can't enter the information, you won't be able to restore your data to the device. Therefore, you will need to know the Google account information that is currently being used on the device.



2

A factory data reset will erase your data from the device. While data stored in your Google account can be restored, all apps and their data will be uninstalled. Open your device's Settings app, tap System > Backup. Turn on Back up to Google Drive.

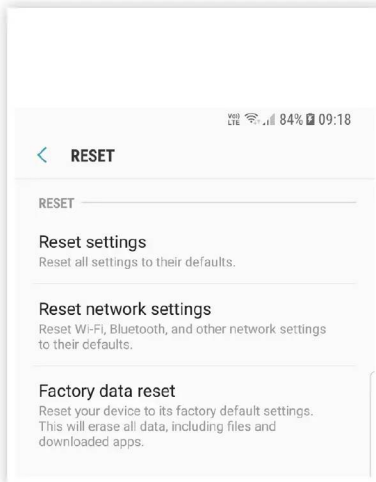


3

A full factory reset can take a long time (up to an hour), so plug your device into a power source and keep it plugged in until the reset completes; ensure you connect your device to Wi-Fi or mobile network. When the reset completes, you'll need to be connected to sign in to your Google account.



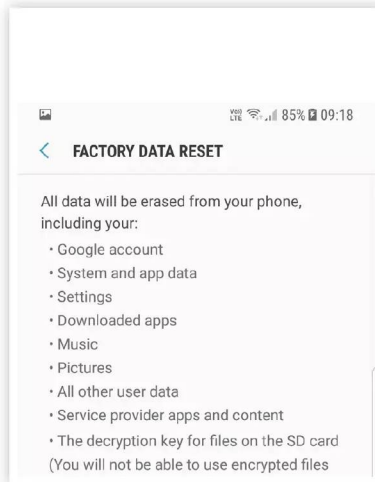
Factory Reset Your Device



1

Open your device's Settings app and tap System > Reset.

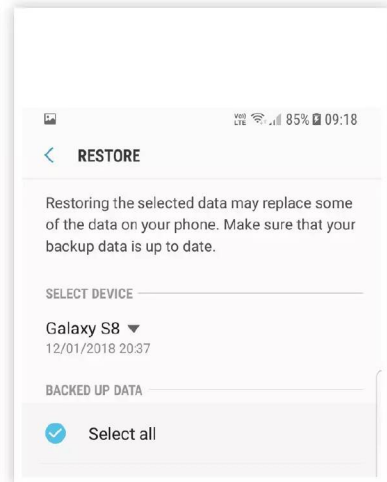
If you have one set up, you may need to enter your PIN, pattern or password at this point, to tell Android that it is you trying to reset the device. On some devices, factory reset may be found under the Backup & reset heading.



2

Tap Factory data reset > Reset phone or Reset tablet. In some cases, this is where you

will need to enter your PIN, pattern or password. To erase all data from your device's internal storage, tap Erase everything. When your device has finished erasing, pick the option to restart.



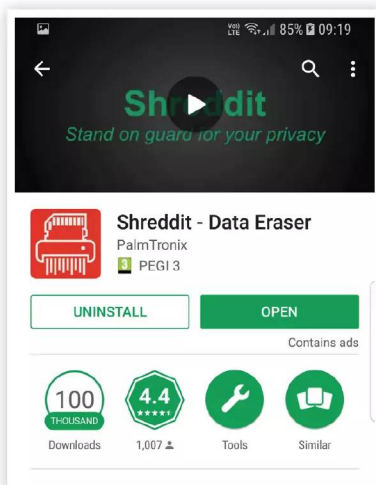
3

If you are resetting the device to sell or give away, you are finished. If not, you need to

set up and restore your backed-up data as with a new device. If you can't open your device's Settings app, you can try factory resetting your Android device by holding its power and volume buttons.

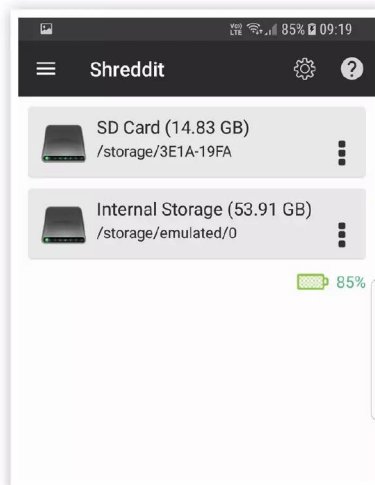
Erasing Specific Data

If you don't want to factory reset your device but do want to permanently remove sensitive data and information from the device, Shreddit - Data Eraser is a useful tool to have installed.



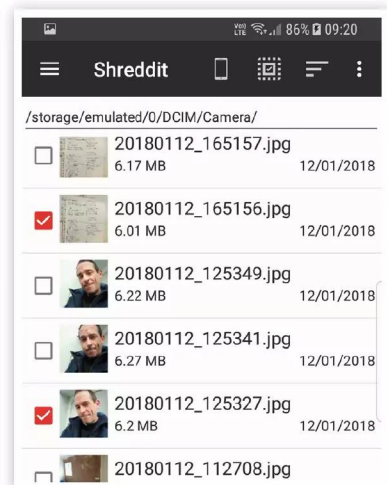
1

SHREDDIT is a data eraser which securely deletes files leaving them irrecoverable. This tool erases your data completely and protects it if it falls into malicious hands. It deploys quick shredding algorithms that shred huge data volumes PERMANENTLY in a matter of seconds.



2

When launched first time the shredder will ask for permission to access photos, media and files on your device. The first screen here mounts your internal and external storage with their mount points path and their total capacity or size. Internal Storage is where you will find app data.



3

Open the relevant folder (DCIM for camera images, etc.) and select the items you want to erase. When you have selected them, tap the red Shred button at the bottom of the screen. Shredding may take a while, so be patient and wait for the process to finish before closing the app.

5 Things That Can Affect Your Phone Signal

There are several things that can affect how good your cell phone signal is, things that you might not automatically consider when a call drops or when your phone shows the dreaded no bars. If you know and understand the types of things that can affect signal strength, you will be in a better position to make sure your calls all get through.

1 Terrain

Your mobile phone communicates using simple radio waves and these travel in straight lines from your phone to the nearest visible cell tower. Anything that gets in the way can cause loss of signal strength or even signal failure. For example, if your nearest cell tower was a mile away, but hidden behind a hill, and the next visible tower was five or ten miles away, your phone would be forced to connect to that one, rather than the much closer tower. In this case, distance would also begin to have an effect on signal strength. If you lived in a valley and all of the cell towers were outside the valley, you would effectively be in a Dead Zone.

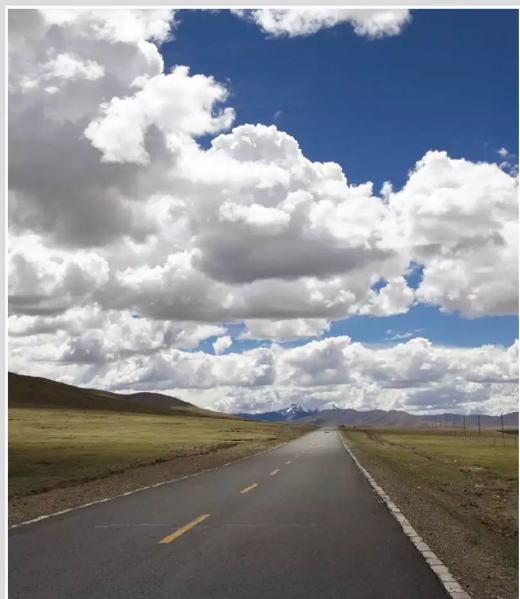
You might think that living in a city would be like being in an unnatural valley all the time but there are usually smaller radio towers or antennas placed all over cities, so the signal never has to travel far. Radio signals can also bounce off buildings and round corners, so you might not even need line-of-sight with a tower to get a signal. Again, in this instance, signal strength would be lost.



2 Distance

The distance they need to travel is always a factor with any radio waves and your phone signal is no different. The atmosphere is full of particles and even in perfect conditions, i.e. no dust, rain or snow, the furthest distance to the nearest tower will need to be less than 25 miles if you expect any sort of signal. Theoretically, a radio wave from a mobile phone could travel 45 miles but depending on the network carrier, components used and the receiving equipment, the realworld distance could be as low as 20 miles.

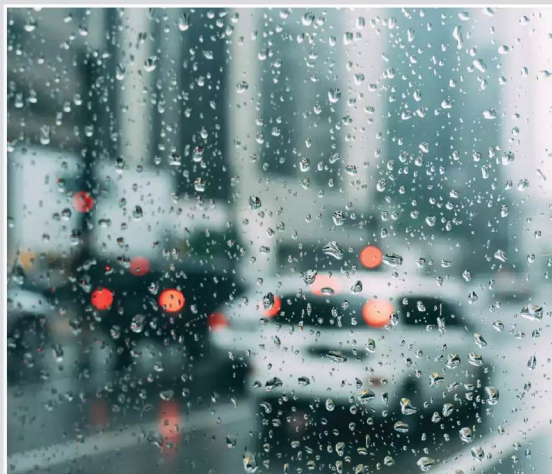
The more powerful the transmitter, the further the radio waves will travel but there is a limit to how powerful a smartphone radio can be. In a city, distance is rarely a problem but in the great outdoors, or even just in rural towns, this is probably going to be the biggest factor affecting the quality of your mobile signal.



3 Weather

Following on from the effect of distance on your mobile signal, is the effect that weather can have. Just how much effect the weather has on your signal depends very much on the type of weather. For example, heavy cloud can cause problems due to complicated sounding things like changes in radio propagation and signal reflection. Heavy rain can really get in the way of radio waves and even light rain will have some effect, particularly if your device is using the high frequency ranges used by 4G.

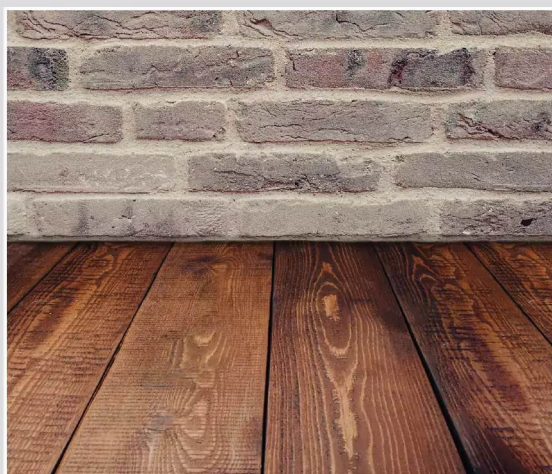
In general, water in any form will reduce how far radio waves can travel and in particular the high frequency waves used by mobile phones. Water vapour will actually absorb energy from the radio waves, converting it into heat, removing its strength.



4 Building Materials

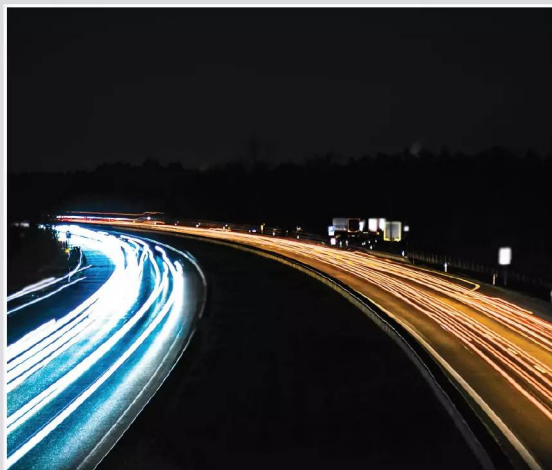
Being inside a building will, to at least some degree, effect how well the signal travels. Commonly used building materials like concrete, steel, brick and plaster are all great at blocking radio waves. Walls of mainly steel construction, or concrete walls with lots of steel reinforcing bars inside, will have the worst effect on signal. This is especially true in rooms such as basements, due to the lack of large windows.

If the lack of signal is just inside the building, i.e. you can get a good signal in the garden or on the balcony, it may be worth investing in a signal booster. This is a fairly simple device that receives the signal inside the building and passes it through a cable to an externally placed antenna. It can then be sent to the nearest mast; If you don't even get a good signal outside, a signal booster won't help.



5 Movement Speed

To make a call, your phone needs to be able to send and receive signals to a tower. This back and forth happens incredibly quickly, so if you are standing still or even moving slowly, there is no problem. However, as soon as you start to move at speed (in a train for example), the constant changes in position can begin to cause issues. Travel at over 60mph and you will probably notice a distinct drop in call quality and anything over 100mph will probably see calls being dropped completely or at the very least, filled with stuttering and interference. Of course, you also have the added problem of potentially moving behind something that obstructs the radio waves as you travel.

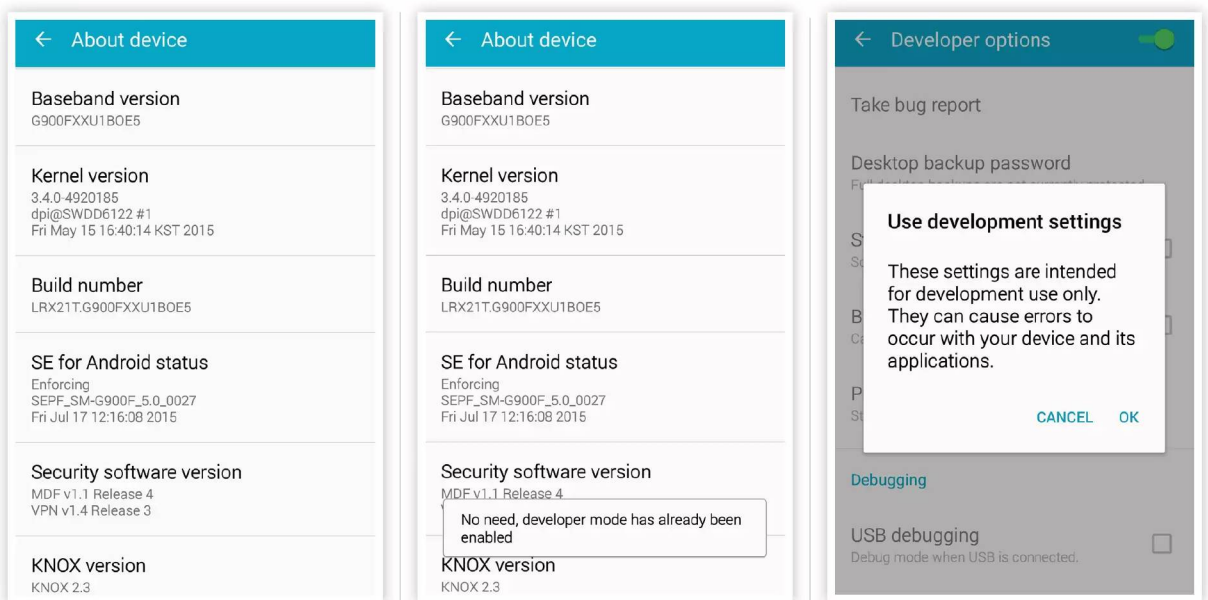


Using the Developer Options

Every Android smartphone and tablet contains a secret set of options - the Android Developer Options. As the name suggests, these are intended principally for developers of apps, used for debugging or simulating certain conditions. There are, however, several options within this menu which more adventurous Android users can utilise to good effect.

Enable Developer Options

If you choose to do so, before you can start to use the developer options, you will need to unlock and activate them in the settings.



1

Open the main settings app and locate the About Device menu (usually found at the bottom of the settings list). This menu gives you access to lots of information about your phone or tablet. Scroll down until you see the Build Number section.

2

Tap on the Build Number heading ten times quickly. As you do so, you will see a message appear counting down and then saying "You are now a developer". Continue to tap the build number heading and the message changes to "You are already a developer".

3

Tap Back and look for the new heading Developer Options in the main settings. Once you open the developer options menu, you will need to use the slider at the top of the screen to enable access to them and allow them to be modified.

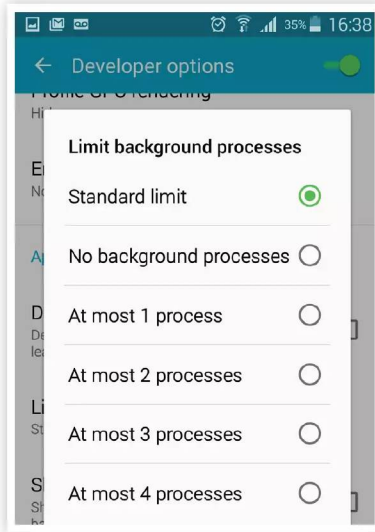
What is ADB?

Android Debug Bridge (adb) is a versatile command-line tool that lets you communicate with a device (an emulator or a connected Android device). The adb command facilitates a variety of device actions, such as installing and debugging apps.



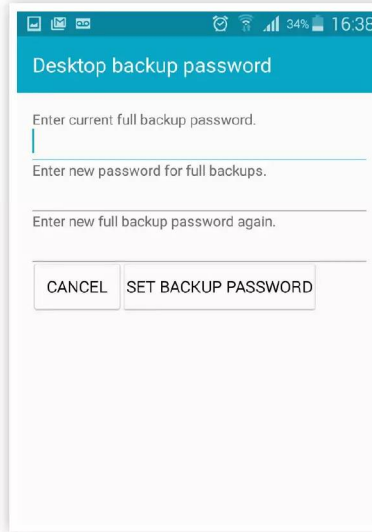
Useful Developer Options

Not all of the developer options are worth changing, or indeed should be changed unless you really know what you are doing.



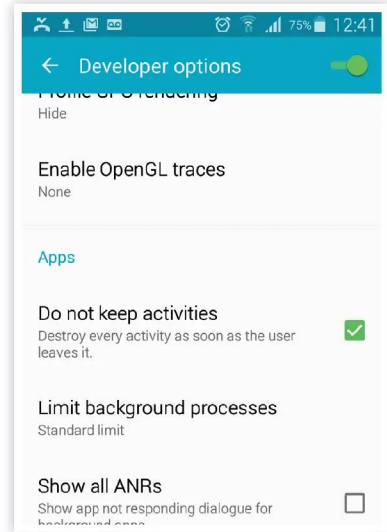
1 - Limit Background Processes

Scroll right down to the bottom of the list and you will see Limit Background Processes. This option lets you set how many processes can run in the background on your device at any one time. Be aware that too small a limit might be counterproductive.



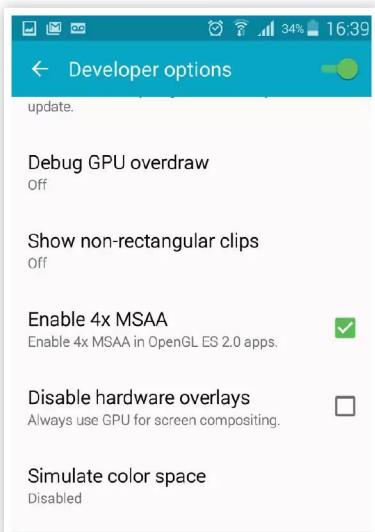
2 - Desktop Backup Password

The Android Developer Options allow you to backup and restore to your PC things such as apps and their associated data. This option requires a password for such backups. You will need to ensure that your device can connect to your computer successfully.



3 - Don't Keep Activities open

Although you need to be a bit careful about using this setting, it can be useful if your phone struggles after heavy use. This option force-closes every application as soon as you leave its main view. Use either this or the Limit Processes option, not both.



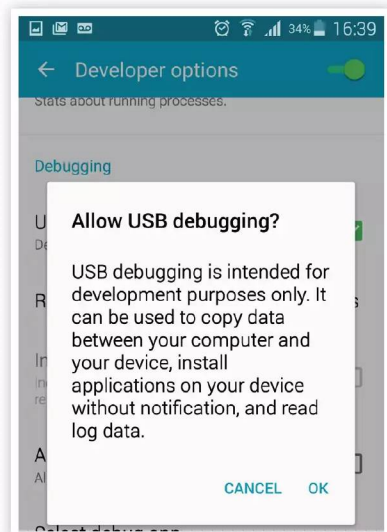
4 - Force 4x MSAA

If you have a powerful phone or tablet and play a lot of games, this setting, which forces multi-sample anti-aliasing (MSAA), can be useful. It essentially makes things look better (and not just games), but puts more strain on the CPU/RAM.



5 - Profile GPU Rendering

This setting draws a visual rendering of how hard the GPU is working over a period of time. You can either view on screen or save to a file. This can be useful if you are trying to work out what apps or features are causing battery drain or lag.



6 - USB Debugging

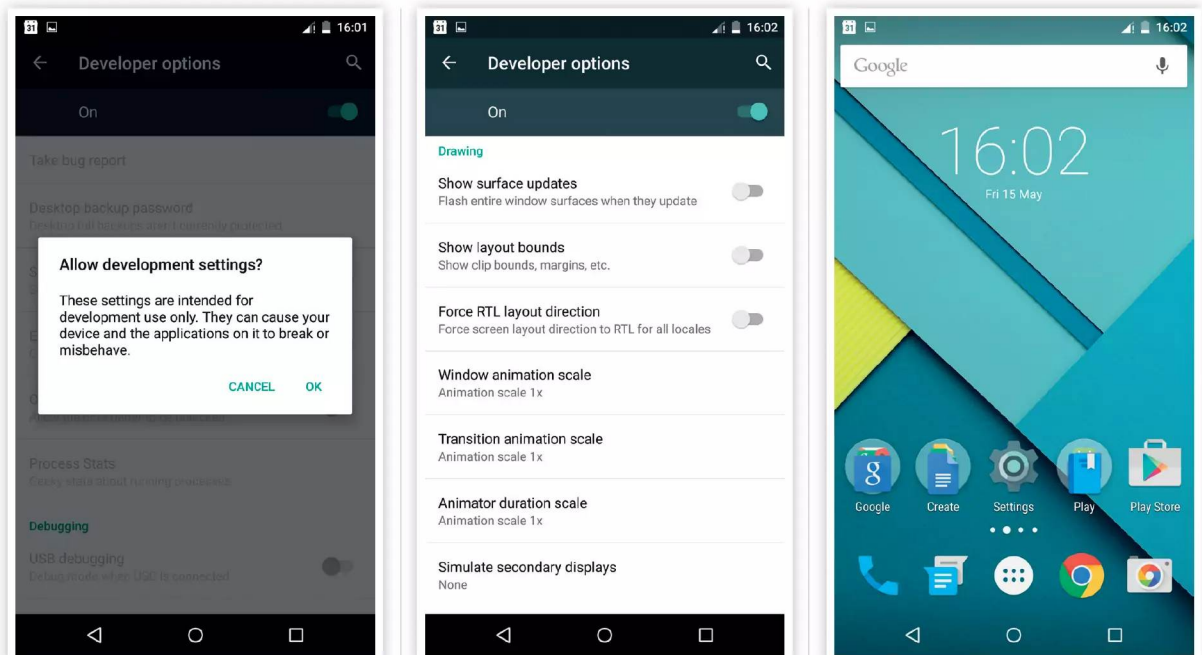
Allows your Android device to communicate via USB to your computer via the Android Debug Bridge (ADB). You can also revoke USB debugging authorisations. This setting will need to be enabled if you plan to flash custom ROMs during rooting.

Speed Up Android Animations

You may already know about the hidden developer menu available on all Android devices running version 4.0 or later of the OS. Within this initially confusing list of settings, you can find some really useful tools for making your device run faster and more smoothly, as well as a few simple tweaks to get the most from your phone or tablet. Here we will look at using animation settings to improve overall performance.

Modify Animation Settings

You can now begin to modify development settings, including the animation settings. It is a good idea to back up your device before continuing.



1

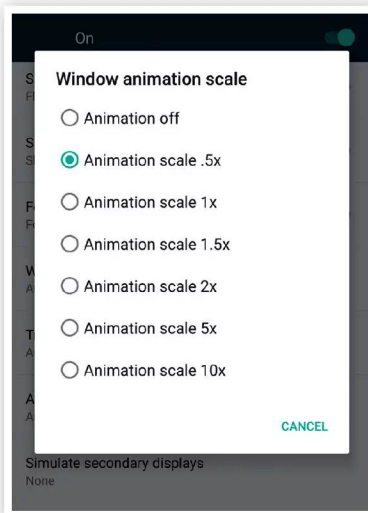
Whilst it may be tempting to play around with the settings here, we suggest leave everything alone until you know what the possible effects could be. And if you do decide to change developer options, change them one at a time and test the changes before altering anything else. Otherwise it can be hard to know what caused any problems that occur.

2

For this guide, we are looking at animation options, which can be found in the "Drawing" section about halfway down the list of settings. You will see three animation settings: Window animation scale, Transition animation scale and Animator duration scale. Each of these options will be set to "1x." This means animations running at normal speed.

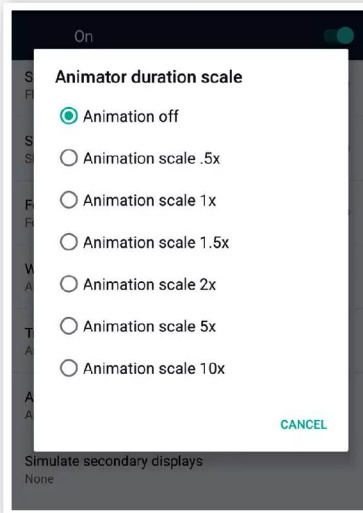
3

Before we go further, you should understand what is meant by animations on Android. Without animations, switching home screen panels, opening apps or scrolling would appear to be an instant switch from one screen to another. Animations provide the sliding effect of home panels or the grow effect when opening a new app.



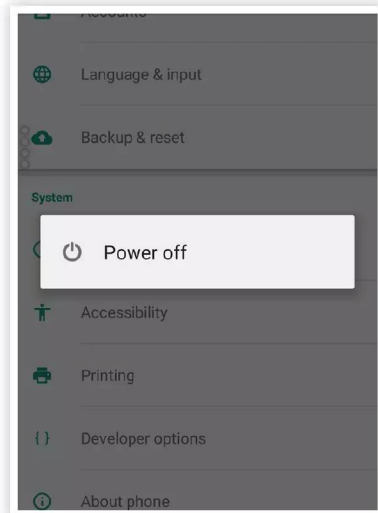
4

Your device has to process these animations every time you switch screens or open an app. But by reducing the animation speed to ".5x", you can speed up all transition effects and not only improve how fast your device runs, but the shorter animation sequences will also make the device seem smoother.



5

If you want to go further, you can change the animation scales to Off. You will speed up transitions and window animations to their fastest, but you will lose some of the smoothness of the operating system. Choosing .5x is a good compromise between speed and how your device looks when used.

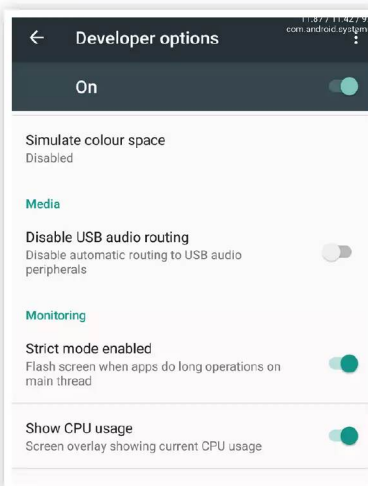


6

If you find that the changes are causing problems, or if you are seeing no improvement in animation speed, try restarting your device. If this still doesn't help, go back into the settings > Developer Options, and reset all of the changes to their original state (or simply turn Developer options off).

Monitoring Performance

There are also several options in the Developer settings that allow you to monitor the performance of your device. This is useful if animation settings cause problems.



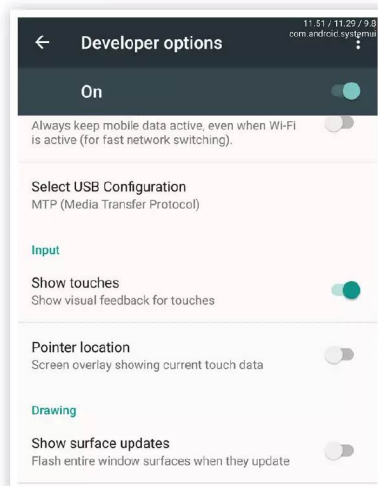
Strict Mode

Enabling this option in the Monitoring section of the Developer settings will cause the screen to flash when apps perform long, potentially heavy data use operations. This allows you to see whether app animations are causing system strain.



Show CPU Usage

This option puts an overlay on the screen that shows CPU (the main device processor) usage at all times. This will display as a red and green bar at the top right of the screen. It allows you to see which actions are causing the most CPU strain.



Show Touches

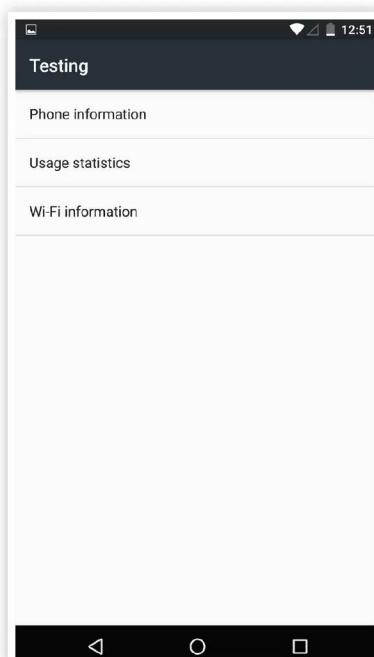
This option is in the Input section and enables screen touch feedback. By viewing where the screen registers your touches, you can monitor whether the system is working accurately. If touches are out of place, you can sometimes fix this by restarting your device.

Hidden Android Test Menus

Hidden within every Android device is a collection of different test menus, that allows users to check allsorts, including how well the touchscreen is responding and whether the notification LEDs are working. You don't need any special apps or additional software to access these test menus, you just need to know which code to enter into the dialler screen. Let's take a look at some of the most useful test menus and what they allow you to do.

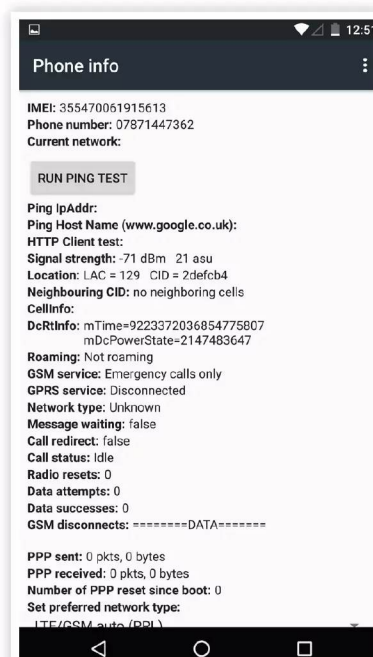
Testing Menu Code

Whichever carrier or manufacturer is involved, these test codes should work for the majority of Android devices. If they do not, try searching online for specific codes for your particular device.



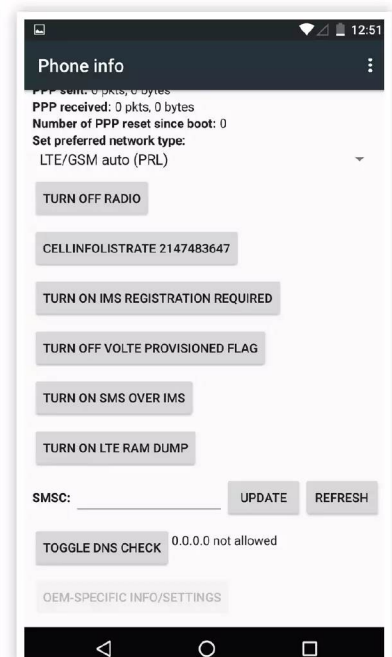
1

Open the phone dialler screen on your phone and type ***##4636##***. As soon as you type the last *, the test menu will appear on screen. This contains four main sections: Phone Information, Battery Information, Usage Statistics and Wi-Fi Information. Tap any heading to see more info.



2

You can gain access to a lot of general information about your phone by going into the Phone information menu. You will also be able to run a PING test that checks the speed of connection to your current phone mast. Be careful when running tests or changing configurations.

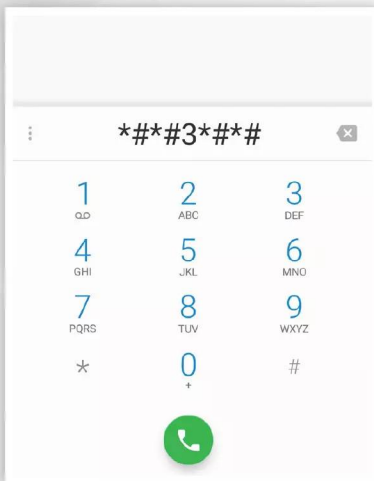


3

If your device has a removable battery, you can find lots of detailed information about the battery in the Battery Info screen. As well as showing the charge percentage remaining, it will reveal if the battery health is good, letting you decide whether buying a replacement is worth considering.



Useful Android Test Codes



Here are some more Android test menu codes to try out. These may not work for every device, but should work for most Android phones.

Camera Information - `*##34971539#*#*` -

To see detailed information about the camera hardware and software in your phone.

Service Test Mode - `*##197328640#*#*`

This Android secret menu lets you access service mode where you can run various tests.

LCD Test Code - `*##0*##*`

This lets you test the LCD display on your device, to see if there are any display errors.

RAM Details Menu - `*##3264#*#*`

This Android secret code can be used to find out your phone's RAM version.

Touch Screen Test - `*##2664#*#*`

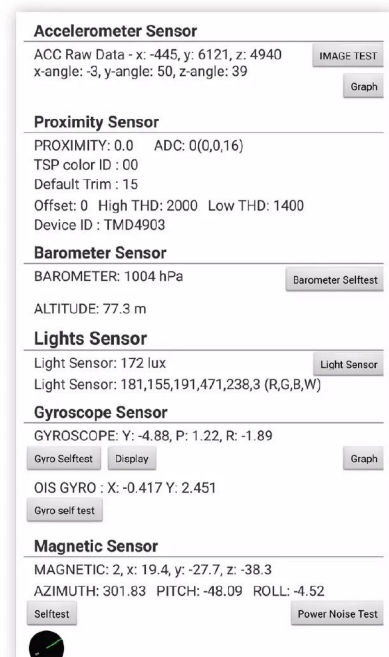
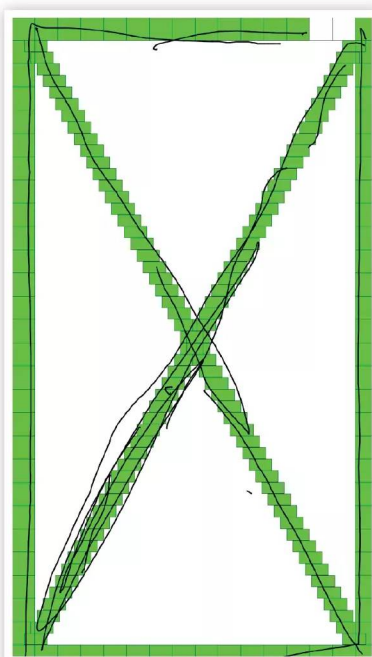
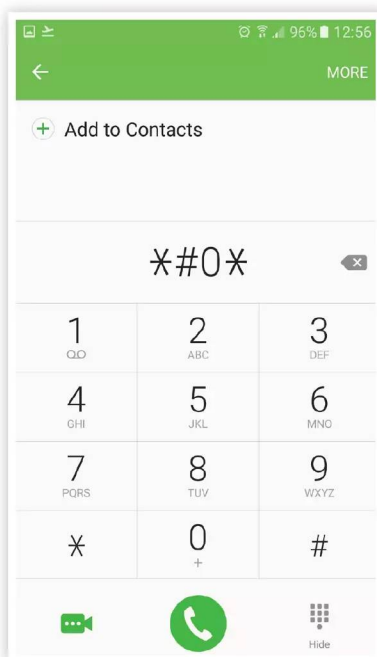
If you want to test your phone's touch screen, then use the code shown here.

Phone IMEI Number - `*#06#`

One of the most popular and useful hidden menu codes for Android, showing you the IMEI number of your device.

Service Test Mode

If you are using a Android device, such as the S6, you can access a unique menu that gives you access to all sorts of tests.



1

As with the previous codes, you will need to enter this one into the dialer screen on your Android phone. Enter the code `*#0*#`. As soon as you enter the code, the test menu will appear. This code may not work on very old Android devices but it should on most.

2

The screen should now be filled with buttons giving access to the tests shown on each. Within each test there may be additional options or requirements. The Touch screen test, for example, requires you to use your finger to highlight all of the elements on the screen before it will complete.

3

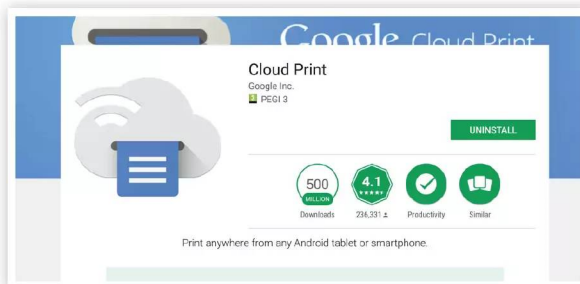
You can leave any of the tests, either when they are complete, or by tapping the Back button on your phone. Once you have completed all of the tests you want to perform, you can leave the test menu by tapping the Back button on your phone twice in quick succession.

Save Web Pages Offline

Your smartphone browser makes it easy to bookmark web pages which you might want to read or refer to at a later date. But what about those occasions when you know you will need to read something online, but also know that you won't have access to a Wi-Fi or Mobile Data connection? Sure, you could spend a load of time cutting and pasting copy from a page to a text document, but why bother when there is a much more elegant solution?

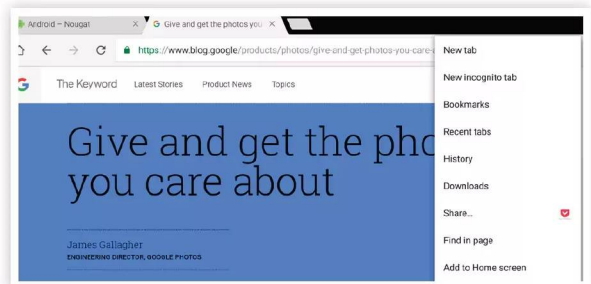
Save Web Pages as PDF

There are a few different options available to you when you want to save a web page for offline reading. The first we will look at is saving as a PDF file.



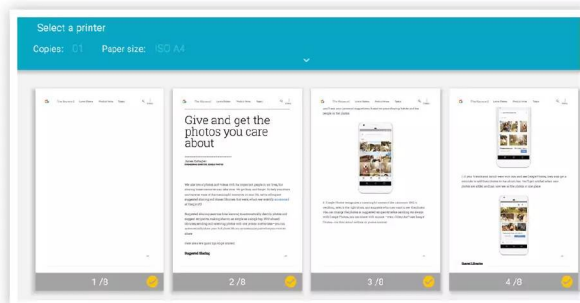
1

This first technique should require no additional apps to be installed, instead taking advantage of the built-in support for PDF's which is part of the printing options on Android. However, if you are using an older device, with an older version of Android, you may need to install the Cloud Print app.



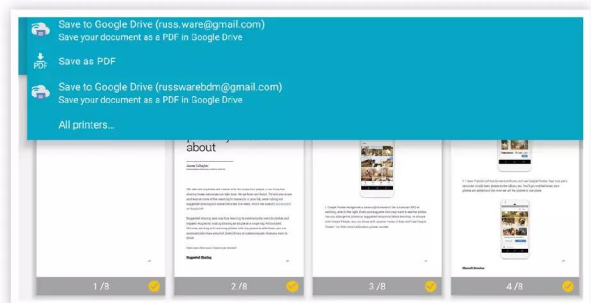
2

Open the web page you want to save to read offline later. In this example, we are using the Chrome browser, but the same features are available in almost all third-party browsers as well. In Chrome, tap the Menu button in the top-right corner, and from the menu, tap the Print option.



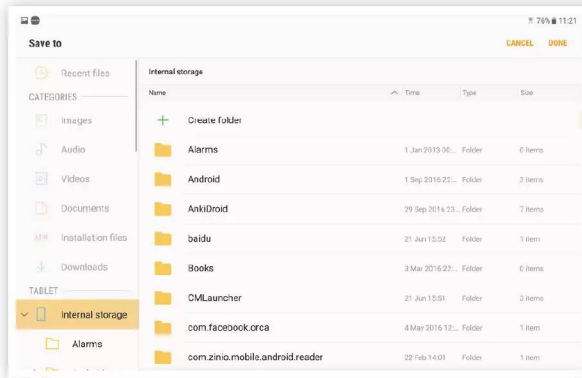
3

The Print Preview screen will appear, showing you what would be printed (should you choose to do that). In most cases, you can use the check mark buttons on each of the displayed preview pages to select and deselect those you don't want. With the content you want selected, tap the printer name.



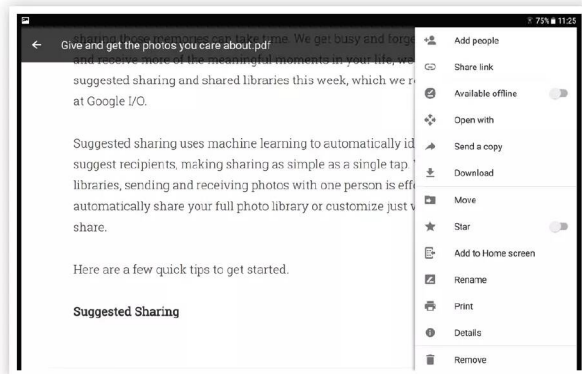
4

This will display any printers available to send the page to for printing. It will also include the option to 'Save as PDF'. Tap this option and the 'Print' button will change to a 'PDF' button. Tap this and a 'Save to' menu will open. You can then choose to save to Google Drive or Downloads.



5

Saving to Google Drive is a good idea, as this means the file will be available on any devices which are linked to your Drive. After a few seconds, the file is saved. The final thing you need to do is open Google Drive, tap the ! button on the file and use the slider to make it "Available Offline".

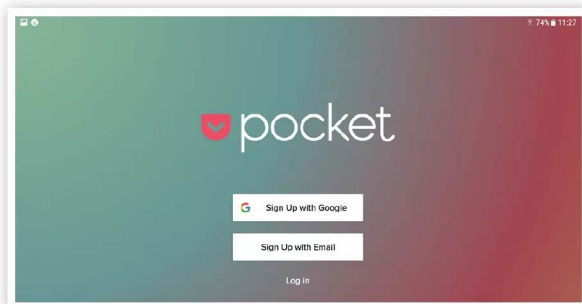


6

You can, of course, choose to save to Downloads. This saves the PDF onto your device straight away (but only the device you download it on). The great thing about saving web pages like this is that everything is kept intact in the document, from text links to images and diagrams.

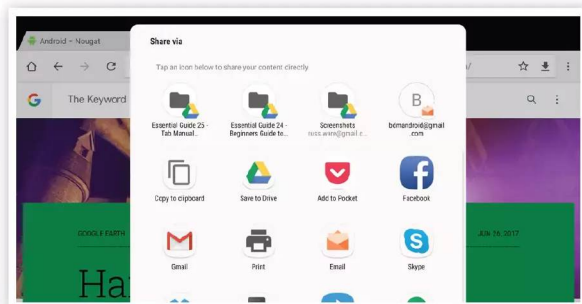
Save Web Pages to Pocket

Pocket allows you to Save directly from your browser or from apps like Twitter, Flipboard, Pulse and Zite. You can download Pocket from the Play Store.



1

The first thing you will need to do is set up a Pocket account. Open the app and tap the Sign Up button. Choose a username and password, and enter an email address. If you prefer, you can set up your Pocket account on your computer. Head over to getpocket.com and look for "Sign Up".



2

To save a webpage to Pocket, open your browser and navigate to the page. Tap the Menu button and select Share > Save to Pocket. Open Pocket and view your list. Here you will see any saved pages, including a thumbnail image if the page had any (the main image will be shown).



3

Tap any item in the list to view it. You can change the display style, including screen brightness and font size, using the buttons at the top of the page. Once you have finished reading the article, you can archive it by tapping the Tick button. Alternatively, tap the Menu button and delete the article.

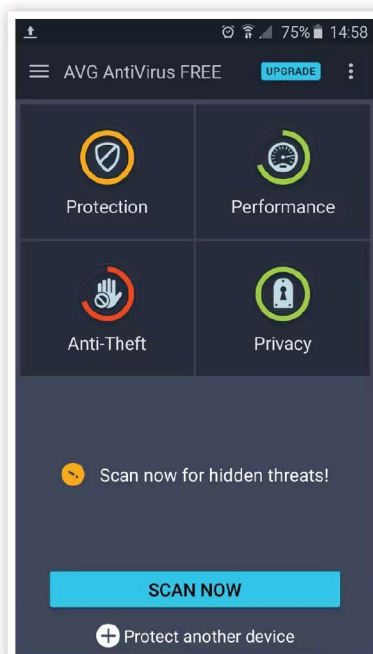


4

Pocket will save pages in a stripped down form, which usually means that images won't display when reading offline in the app. If you prefer, and if you have a Internet connection, you can tap the menu button in Pocket and select "Switch to Web View" to see the original full version.

Dealing with Viruses on Android

In some ways, when it comes to viruses, malware and other tech nasties, Android is a victim of both its own success and of its open nature. If you read any of the tech news, or even mainstream news sometimes, it can seem like virus threats on Android are increasing by the week. Exactly how much of a problem is this then and what is Google doing to make sure your device isn't affected? Read on to learn more about viruses on Android.

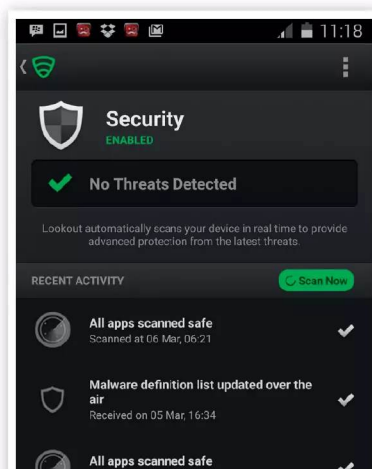


Antivirus Software

Just like on your computer there are lots of different Anti-virus tools available on Android; and just like on a PC, they all do broadly similar things and offer similar features. You will also have a choice of using a free app, or paying for a premium app. One of the best free apps is AVG AntiVirus FREE. With AVG AntiVirus FREE for Android phones and tablets you'll receive effective, easy-to-use virus and malware protection, as well as a real-time app scanner, phone locator, task killer, app lock and local device wipe.

Understanding Virus Threats

You really don't need to panic over the threat of viruses on your device, but it makes sense to know more about them.



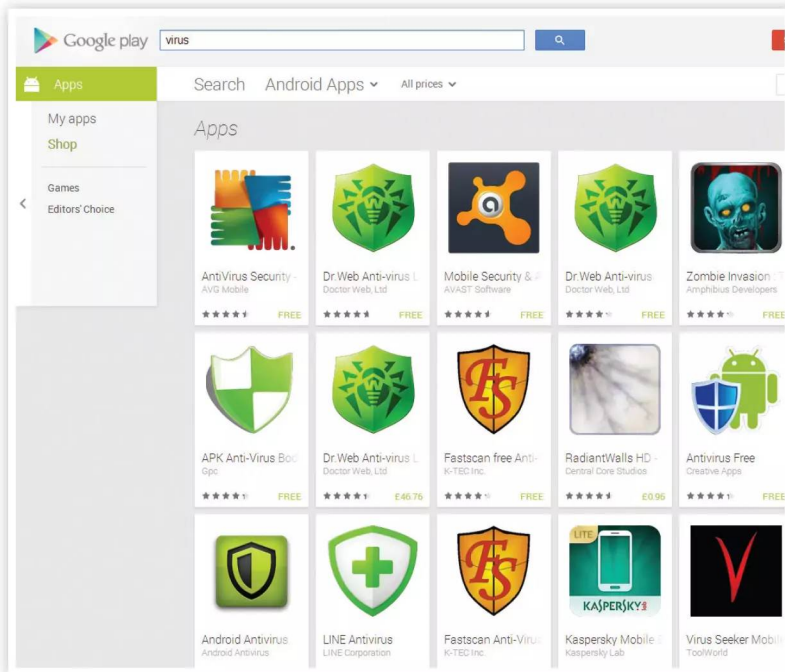
Android Viruses

There are thankfully still few known viruses which affect the Android operating system. One of the most well-known is Trojan-SMS. AndroidOS.FakePlayer.a. This was the first Trojan-SMS virus identified on Android, and was thought to have infected hundreds of thousands of devices. The virus was capable of sending SMS messages to premium rate numbers without the user having any indication that something was wrong. Other well-known viruses include Gingermaster, which was capable of stealing user information from the infected device (user ID, SIM, IMEI, etc.) and DroidKungFu, which allowed back door access to the device and files to be removed.



Android Malware

The distinction between viruses and malware on Android is something of a grey area. Viruses get called malware and malware get called viruses. It is safe to say, however, that you really don't want either to infect your device. One of the best known malware attacks was DroidDream (also known as Android. Rootcager) which affected around 60 apps on the Android Market (Google Play store) in 2011. The malware added infected devices to a botnet, installed additional software and stole data. It is thought that hundreds of thousands of devices were infected, even though Google was quick to release a fix for the problem.



What is Google Doing?

Although it hasn't always been super quick to remove infected or suspicious apps from the Play Store, Google is now taking the threat of malicious software seriously. It is getting quicker at removing dodgy apps, and in 2012 the company introduced Bouncer. Bouncer provides automated scanning of the Android Market for potentially malicious software without disrupting the user experience of the Android Market or requiring developers to go through an application approval process. Android also features several things that reduce the threat of malware and viruses.

Sandboxing

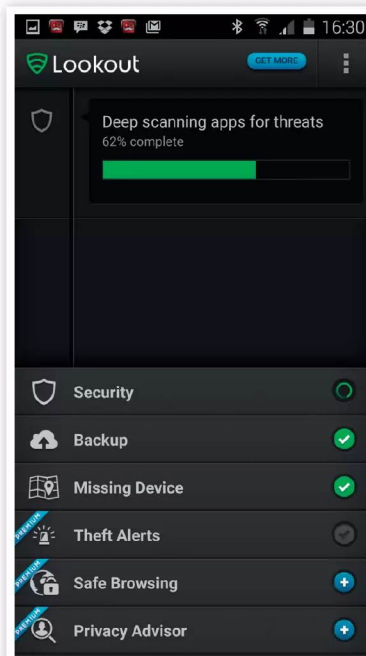
The Android platform uses a technique called "sandboxing" to put virtual walls between applications and other software on the device. So, if you download a malicious application, it can't access data on other parts of your phone and its potential harm is drastically limited.

Permissions

Android provides a permission system to help you understand the capabilities of the apps you install, and manage your own preferences. That way, if you see a game unnecessarily requests permission to send SMS, for example, you don't want to install it.

Malware removal

Android is designed to prevent malware from modifying the platform or hiding from you, so it can be easily removed if your device is affected. Android Market also has the capability of remotely removing malware from your phone or tablet, if required.



Virus and Malware Safety Tips

No operating system is completely safe, but it can be made safer by following a few simple steps. These tips will help to reduce the possibility of your Android device being infected.

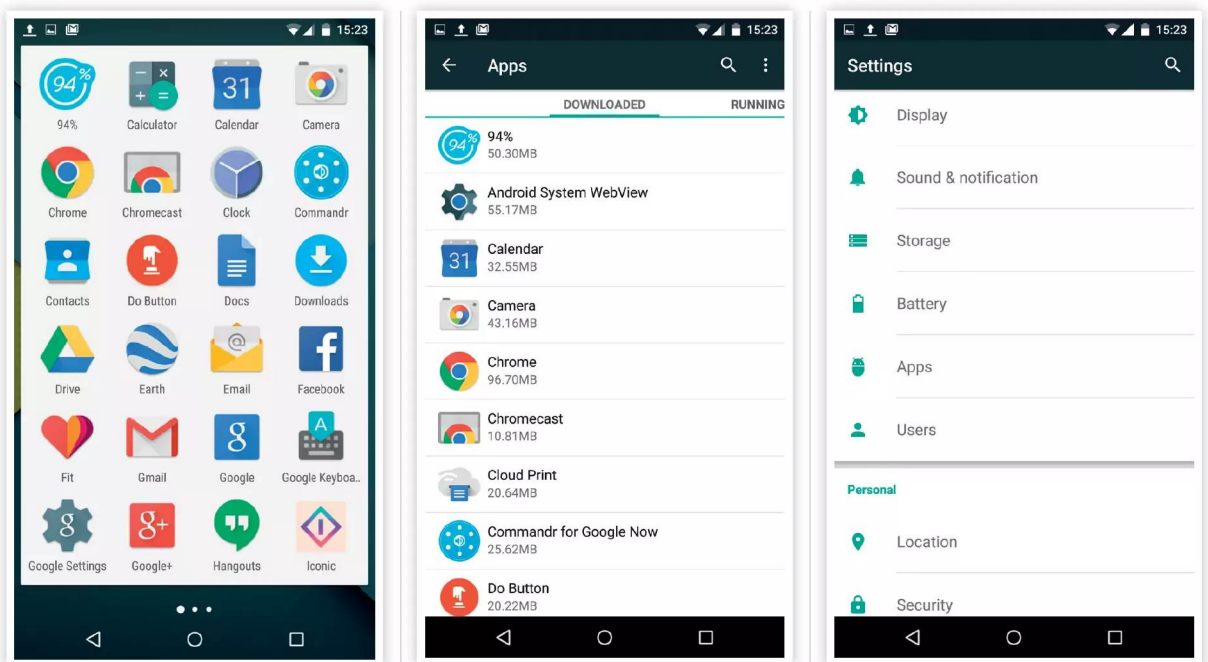
- 1 Install a reputable anti-virus app on your device. Although the way Android is built means that anti-virus apps cannot be perfect, having one installed will at least catch some infections.
- 2 Avoid installing apps from third-party app stores if at all possible. Sideloaded (installing apps using the .apk files found on unofficial websites) can be a source of virus infection.
- 3 Google, via the Play Store, can remotely remove infected applications from your phone. If you receive a notification to tell you a suspect app has been removed, make sure that you double-check.
- 4 It is highly advisable to keep installation of apps from Unknown Sources set to Off in the device's settings. This will help ensure that nothing enters the system except through official channels.
- 5 Check permissions carefully. When you install any app from the Play Store, you are shown which permissions the app requires to work. If you don't like the sound of any of the permissions, avoid the app.

Disable Android Bloatware

No matter which brand of Android device you choose, from Acer to ZTE, most are all guilty of containing at least a few examples of bloatware. Bloatware means apps or services added by the manufacturer or carrier which take up memory and processing power on a device. Unless you want to root your device, removing bloatware is not possible. Disabling it however is possible.

Application Settings

The exact location of the app settings will vary between devices. You should however, always be looking for Applications, App Management or App Settings.



1

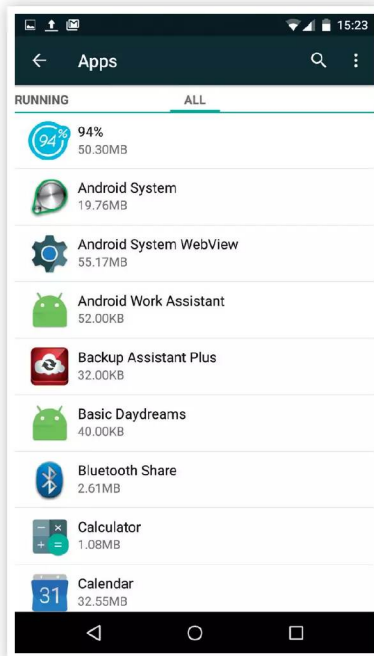
When disabling bloatware, don't be fooled into thinking that just because you don't use a particular app or service that it is not essential to your device. Removing essential apps or services may cause problems with how your device works. It is therefore important that you understand exactly what you are disabling before you disable it.

2

The best way to put a stop to bloatware safely, is to disable one app at a time. Once you have disabled an app, check that your device is still working as it should before you go ahead and remove the next bit of bloatware. This makes the task of removing bloatware more labourious, but reduces the risk of disabling something important by mistake.

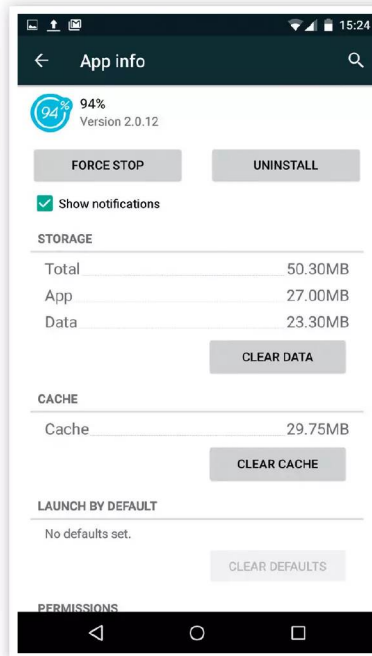
3

To actually begin disabling bloatware on your Android device, open the main settings app on and look for Application Manager. This may be in the main settings list under Apps or, on some older devices, under the More tab at the top of the main settings screen. The application manager is a great tool for viewing exactly what apps are running at any given time.



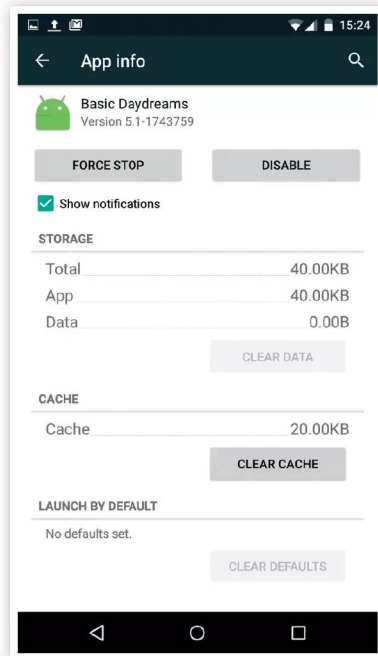
4

Tap Application Manager and swipe across the screen to the left. This will reveal the different application categories (Downloaded, On SD Card, Running and All). To find bloatware, go to the All tab.



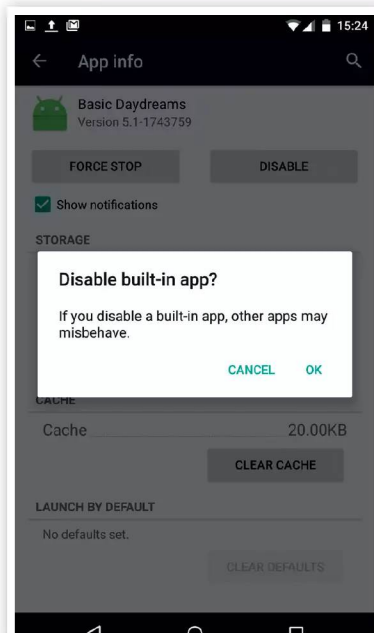
5

When you find an app or service that you think you would like to disable, tap on the name. If the app or service is not bloatware, you will see an Uninstall button next to the Force Stop button (you might also see uninstall updates).



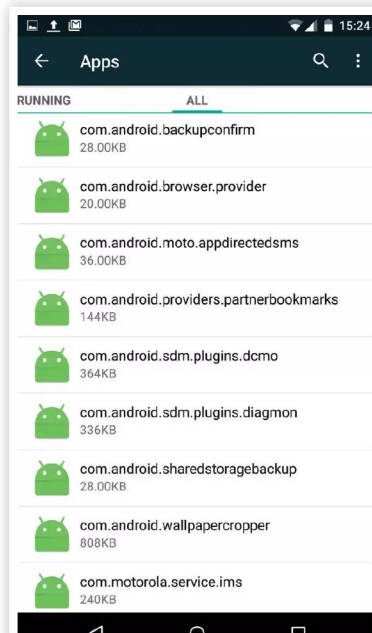
6

When you find a bloatware app or service, the Uninstall button will say Disable instead. Some essential system services (such as the camera app or the Android system) will have the Disable button greyed out so it cannot be used.



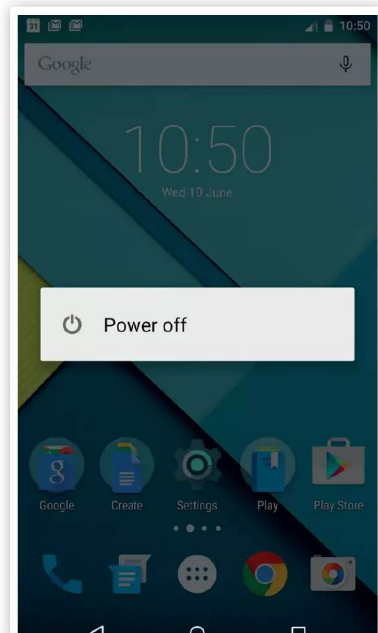
7

Click Disable on the bit of bloatware you want to stop. A warning will appear to tell you that completing this action may cause some apps to work incorrectly or not at all. Disabled apps will not appear in the app drawer.



8

As a general rule, any app or service that should not be disabled will have an Android icon next to the name in the Application Manager. If you disable something by mistake, a restart of your device will often fix the error.



9

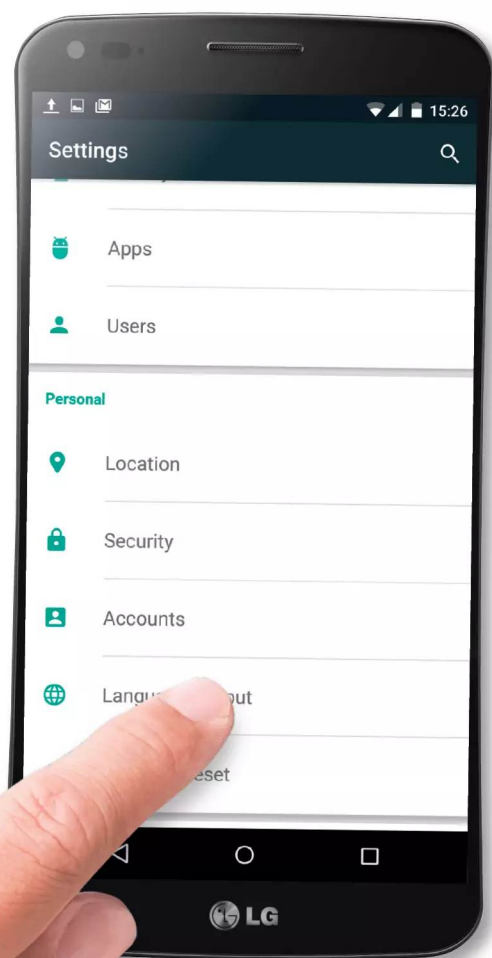
When you finish disabling the bloatware you no longer want to have running, you may need to reboot your device for the icons to be removed from the home screen and main app drawer. It is best to perform a hard reset for a full reboot.

Sideloading Android APKs

There are hundreds of thousands of apps available on the Google Play Store, from Angry Birds to Twitter to Groupon. Occasionally, there might be an app you want which isn't, for several possible reasons, available through the official download method. Although there are risks involved, it is possible to install apps using other methods. This is known as Sideloading.

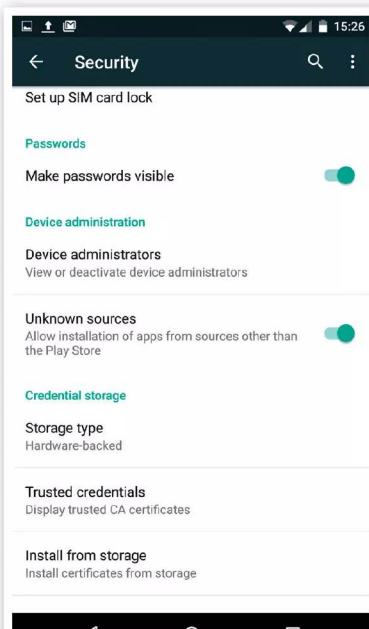
Sideload with Confidence

Sideloading is inherently more risky than installing .apks from the Google Play store but as long as you take care, your device should be safe.



1

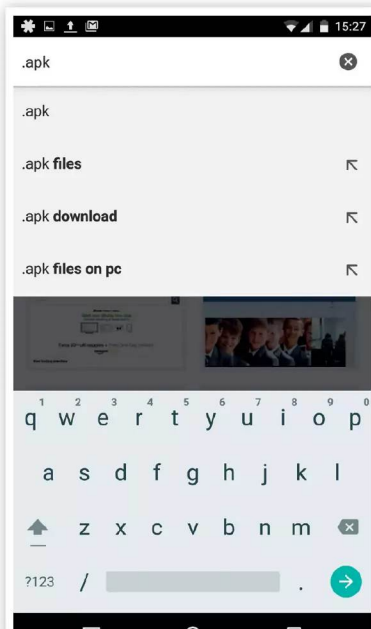
On your device (or any device running Android 4.0 or higher), tap the Main Settings app, tap the More tab and scroll down to Security. Under the Device Administration heading, select Unknown sources.



2

Selecting this option will allow you to install apps outside of the Google Play Store.

Depending on your device, you can also choose to be warned before installing harmful apps by selecting Verify Apps.



3

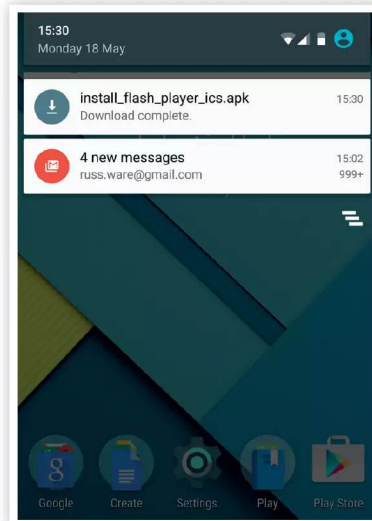
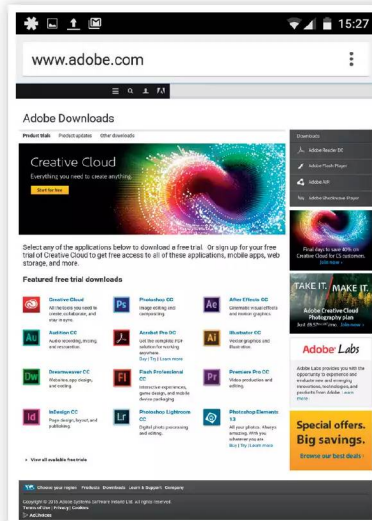
The next step will be finding an Android package file, also known as an APK, which is the way

Android apps are packaged, distributed and installed. APKs can be found quite easily with a Google simple search.



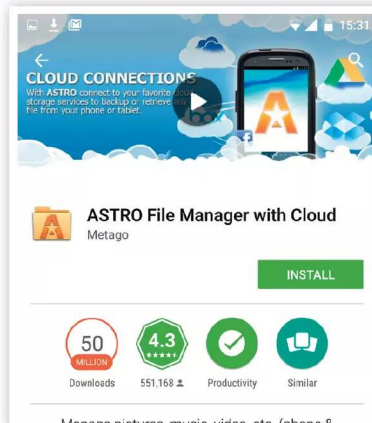
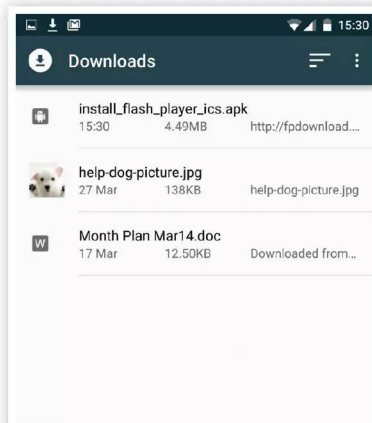
Sideload Explained

Sideload is a term used in Internet culture, similar to “upload” and “download”, but in reference to the process of transferring data between two local devices, in particular between a computer and a mobile device such as a mobile phone, smartphone, PDA, tablet, portable media player or e-reader. Sideload typically refers to media file transfer to a mobile device via USB, Bluetooth, Wi-Fi or by writing to a memory card for insertion into the mobile device. When referring to Android apps, “sideloading” typically means installing an application package in APK format onto an Android device. Such packages are usually downloaded from websites other than Google Play. Sideload of apps is only possible if the user has allowed “Unknown Sources” in their Security Settings.



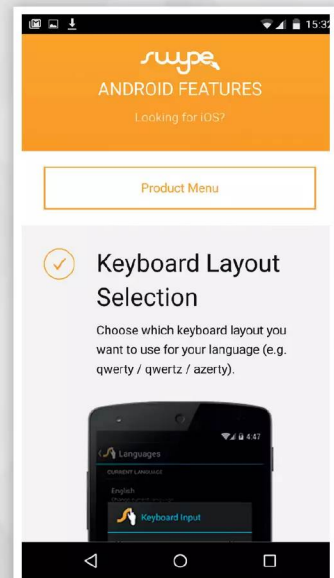
4 You should never use sideloading as a way to pirate applications. This is an almost sure-fire way of your Android device getting a virus. You should only download APK files from trusted developers and companies.

5 The easiest way to download and install an APK file is on your device. Use Chrome or the stock Android browser to navigate to the download page for the APK. You can also download on a PC and transfer the file.



6 Go to your app drawer and click Downloads; here you will find the file you just downloaded. Open the file and install the app. If you downloaded the APK file on your computer, the process is slightly different.

7 You will need to connect your Android device to a PC in USB mass-storage mode. Drag and drop the file onto your device and then, using a file manager such as Astro, you can locate the file on your device and install it.



Risks of Sideload

If you take precautions, the risk of installing apps from sources other than the Google Play Store is actually pretty minimal. Here are a few things to consider before sideloading.

Untested Software - Software which doesn't work as it should is probably the least of the possible risks when

sideloading apps onto your Android device. Be especially wary if paying for apps.

Virus Infection - The Google Play Store is pretty good at weeding out viruses hidden in apps, but you simply don't have that protection when sideloading. Ensure you have good anti-virus software.

Malware or Spyware - Although similar to a virus, malware or spyware is not generally as damaging. It is more likely to slow your device down than kill it. Again, security software is a must.

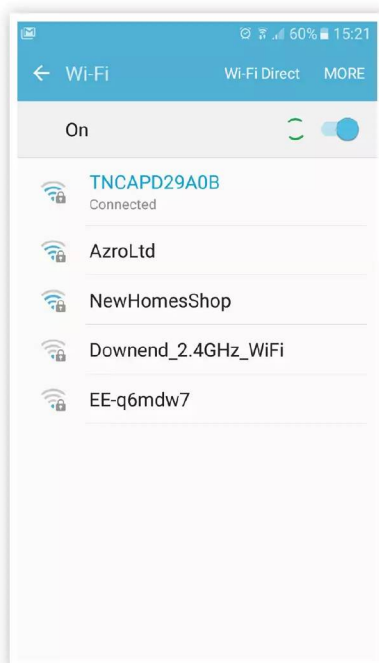


Smart Home on a Budget

If you have deep pockets, it is now possible to completely transform your house into a Smart Home, with a single portable control system for everything from lights and music, to heating and security. These bespoke systems cost several thousand, and take a lot of work to install. However, if you are clever, and do some creating thinking, it is possible to create a smart home on a budget.

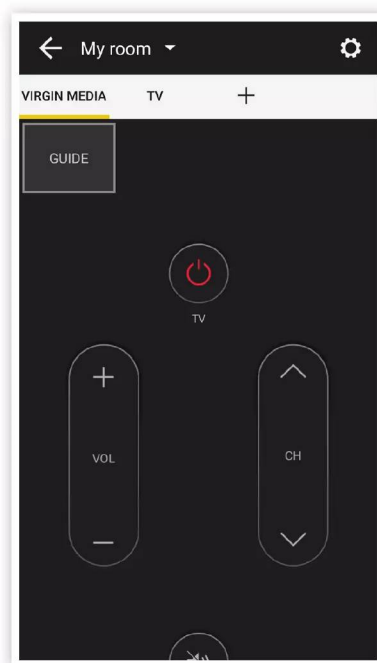
Smart Home Essentials

If you want to add Smart Home features to your home, you will need to ensure a few essentials are in place first, aside from the Smart gadgets we will look at in a moment.



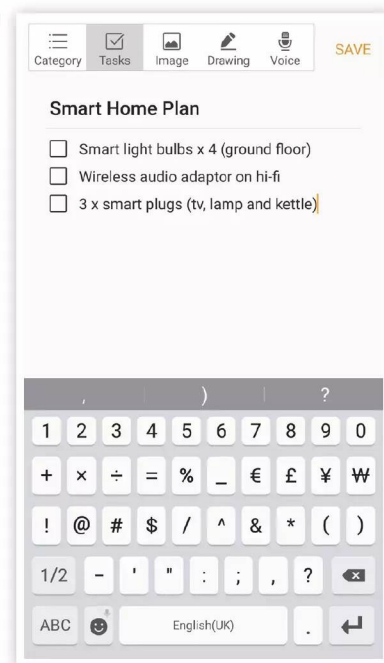
1 - Wi-Fi

Almost without exception, Smart tools and gadgets will need to connect to a Wi-Fi network to work properly. This is how the devices share information, and how they are remotely controlled. This means you need to have a fairly strong and stable Wi-Fi network set up in your house. Without a Wireless network in place, a Smart Home on a budget is just not possible.



2 - Controls

The Smart Home gadgets we will be looking at here all require a companion controller app to be installed on a phone or tablet. This can be inconvenient to have on your current phone, so ideally use an old phone or tablet as a dedicated controller (the phone or tablet doesn't need to be very powerful, but remove anything not needed for the Smart Home control).



3 - A Plan

There are limitations with this budget Smart Home setup, as you might expect. For example, it is unlikely that you will be able to replace every lightbulb with a smart lightbulb and control all of them from a single app. It is therefore important to have a plan as to what your priorities are. For example, just having smart bulbs in your lamps, not the main light fittings.



Smart Home Gadgets

Let's take a look at some of the many Smart Home gadgets available, to hopefully give you ideas for your own budget Smart Home.



Awox SmartLED 7w Bulb

Price: From £19.99 \$16.49 €19.99

www.mobilefun.co.uk/.com

Perhaps the most simple Smart Home tech, these smart bulbs are affordable, reliable and can be set up to be controlled individually or as a group from a single easy-to-use app. You can control both the brightness and the colour of the bulb wirelessly.



D-Link Smart Plug

Price: From £24.99 \$29.99 €29.99

www.mobilefun.co.uk/.com

The D-Link Home Smart Plug lets you turn electronic devices on or off from anywhere inside or outside your home. The smart mains adapter controls your devices through an internet connection to provide wireless control for your TVs, heaters and much more.

Transmitter & Receiver

aptX



Avantree Saturn

Price: From £39.99 \$43.49 €44.99

www.mobilefun.co.uk/.com

The Avantree Saturn is both a Bluetooth receiver and transmitter allowing you to connect Bluetooth music devices to non-Bluetooth speakers or vice-versa. This means you can use your old-school CD player with your latest Bluetooth speakers and because Avantree have used the latest 'aptX' decoder the music is HD quality.



Perfect Bake Smart Baking

Price: From £44.99 \$48.49 €49.99

www.mobilefun.co.uk/.com

Perfect Bake includes everything you need to achieve this, creating delicious cookies, muffins and all kinds of tantalising snacks and treats that will make your mouth water. Perfect Bake does all the measuring for you, taking any of the complication away and helping you become a master chef.



Spigen Pan & Tilt HD Camera

Price: From £75.00 \$80.99 €79.99

www.mobilefun.co.uk/.com

Monitor your home from anywhere with the Wi-Fi enabled HD Camera from Spigen. Featuring two-way audio, night vision, pan and tilt controls, you can be assured of seeing the whole picture no matter what the time of day. 720P HD video monitoring with IR-Cut provides a crystal clear picture.



Samsung SmartThings

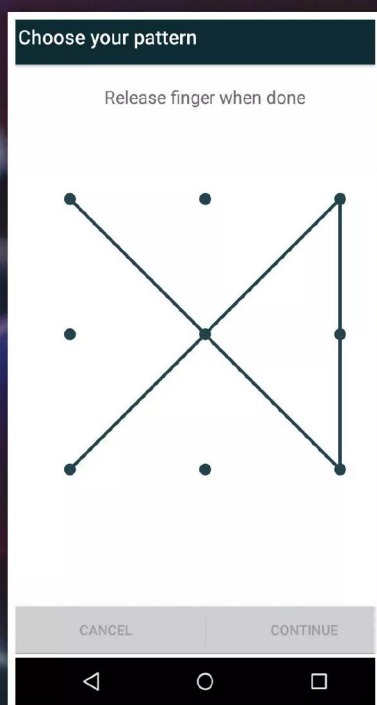
Price: From £199.99 \$199.99 €199.99

www.mobilefun.co.uk/.com

The SmartThings Starter Kit lets you monitor, control and secure your home from anywhere. Including in the Starter Kit are a number of devices from the Samsung SmartThings range including the Hub, Motion Sensor, Multi Sensor,

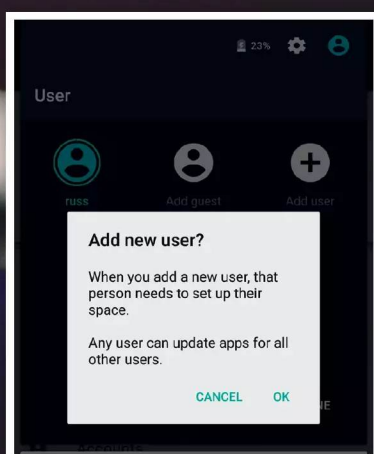
10 Android Security Tips

Gone are the days when your phone was just your phone. Now we are using our Android phones more often to store passwords, banking details, emails and other valuable information. Before you even begin adding this sort of information to your phone, you need to think about security.



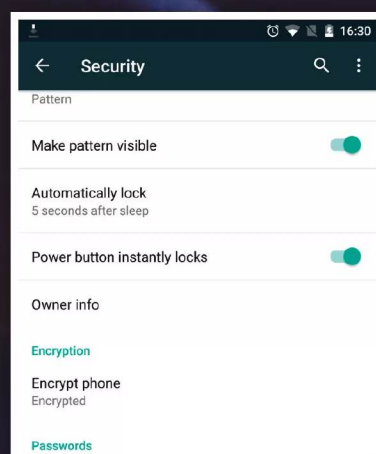
1. Add a Screen Lock

It has probably been said to you before, but setting up a screen lock pattern, password or PIN is an essential security step; one which every user should make a priority as soon as their device is set up. PIN and password locks are the most secure option, but a pattern lock generally offers faster access to your device and is easier to remember for most users. If you do use using a pattern lock, at least make it complicated enough that it can't be easily guessed. Several of the more advanced Android security features will require a screen lock in place before they can even be set up, let alone used effectively.



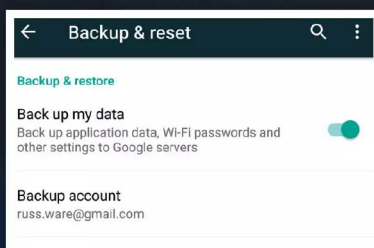
2. Set Up User Profiles

If your device is to be shared with other members of your family, take advantage of the User Profile option and give everyone their own secure area. Each user gets to have their own email account, apps and photo store, so your privacy (as well as theirs) is preserved. If you are just letting a friend or colleague use your device for a few minutes, set up a Guest Profile instead. This provides a short-term, secure account for the guest to use, without giving access to your private data.



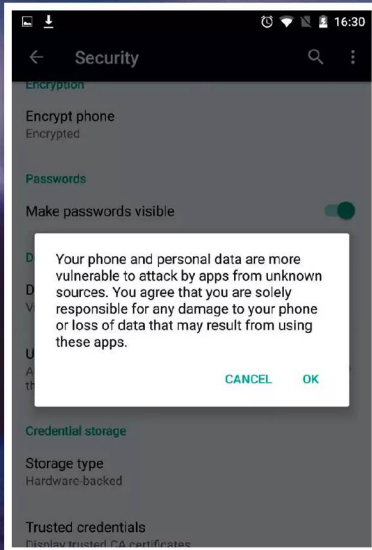
3. Encrypt Your Data

Encrypting the data on your device adds an extra layer of protection if your phone or tablet is lost or stolen. Encryption stores your data in a form that can only be read if you have the right credentials. You can encrypt all the data on your Android device, including your account data, app data, music and other media, and downloaded information. You can add encryption via the Security menu in Settings. On devices running Lollipop, you will be asked if you want to add an additional sign-in on boot when setting a screen lock.



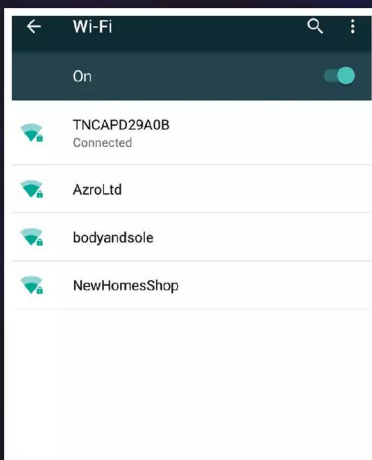
4. Back Up Regularly

Regular backups should definitely be a part of your Android security setup. While having current backups doesn't actually make your device more secure, it does make losing or breaking your phone much easier to recover from. Google can easily be set to create automatic backups in Settings > Backup my Account.



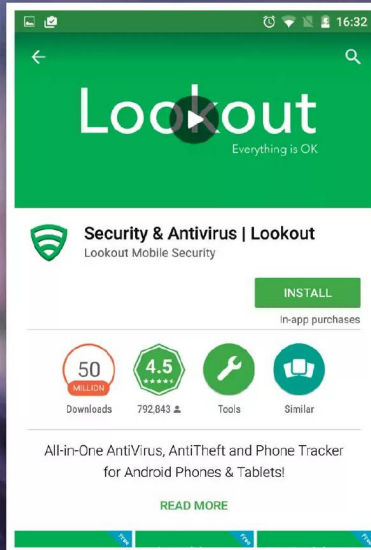
5. Let Google Verify Apps

All of the apps available on the Google Play Store have been checked and verified by Google. It is possible, however, to install apps from sources other than the official store, and these apps can contain harmful software. If you install apps from other sources, you can turn on app verification to make sure the apps you install are scanned for malware. Open Settings > Security and turn on Scan Device for Security Threats.



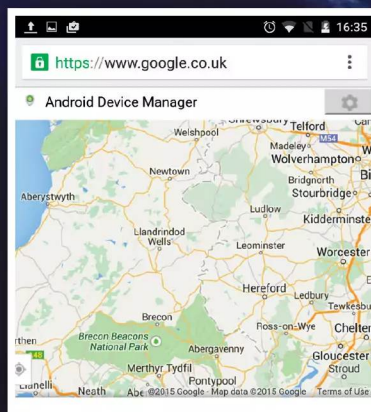
8. Avoid Unsecured Networks

Never join an unsecured network. This is especially true when doing business with your smartphone or tablet, but it should really be the general rule for any mobile devices. If you often work in coffee shops and restaurants, and need to connect to the Internet, only use those networks with a password. If you do have to work on a wireless network with no password, make sure you don't transmit sensitive data.



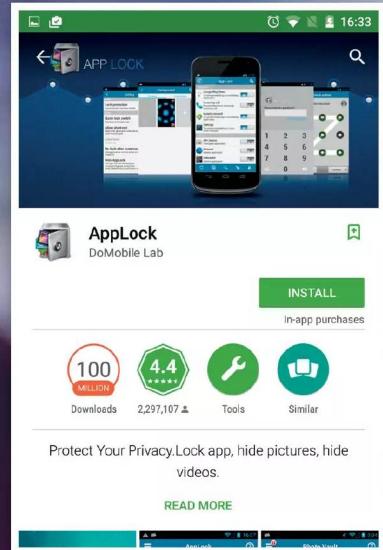
6. Install a Security App

Although Android devices provide lots of security tools right out of the box, it is still a good idea to install a reputable third-party security or anti-virus app such as 360 Security, Avast Antivirus & Security or Lookout Mobile Security. Many of these not only allow you to scan for viruses and malware, but also include real-time browser scans and performance-boosting tools. It is worth trying out a few to see which one works best for you.



9. Enable Android Device Manager

Android Device Manager comprises a set of tools which you can access through your computer browser. If you lose your Android device, you can use Android Device Manager to show its location using GPS, make it ring at full volume, lock it remotely, and wipe it remotely. Some devices will have ADM automatically enabled, while others will require you to enable it in the Security Settings. Once enabled, you can access ADM on any browser at www.google.com/android/devicemanager.

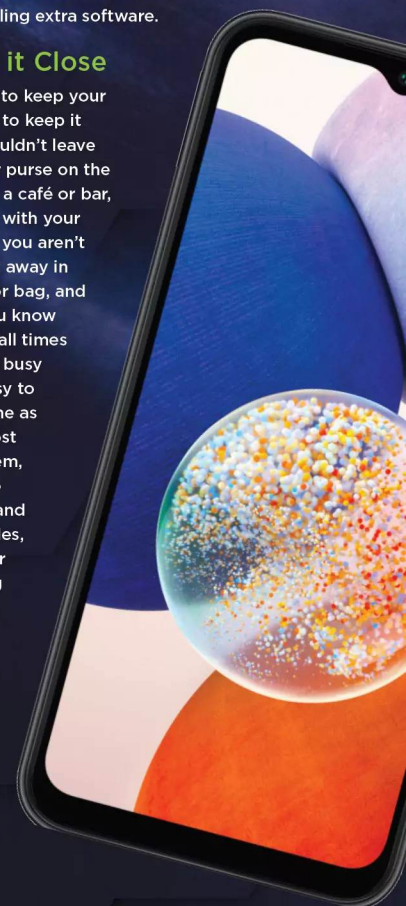


7. Lock Your Apps

Locking individual apps is a secondary layer of security to prevent anyone from using your lost device if they have managed to bypass your locked Android. You can use a free app like App Lock for this purpose. The idea here is not to lock every single app in your device; just the data-sensitive ones like your Email apps or file managers. Some devices include a locked area which can be used for this purpose without installing extra software.

10. Keep it Close

The best way to keep your device safe is to keep it close. You wouldn't leave your wallet or purse on the table when in a café or bar, so don't do it with your phone. When you aren't using it, put it away in your pocket or bag, and make sure you know where it is at all times if you are in a busy place. It is easy to see your phone as a cheap, almost disposable item, largely due to carrier deals and yearly upgrades, but remember that replacing your device mid-contract can be expensive.



Clean Up with Smart Manager

Smart Manager is a fairly new tool, pre-installed on many new devices and available as a download on the App store if not. It combines several tools and utilities into a single app interface, making it easy to quickly check things like battery level and usage, storage capacity remaining and amount of RAM being used. Like similar third-party apps (CleanMaster etc.) it provides both detailed information and one touch optimisation.

App Management

Smart Manager is a very useful tool, or collection of tools, which helps you keep your device running faster and more smoothly at the touch of a button.



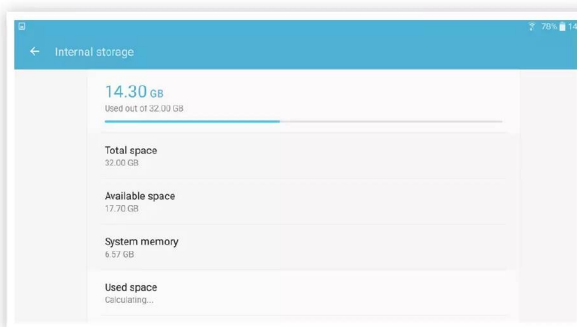
1

Smart Manager can be found in the main app drawer of your Android device. As mentioned if it isn't pre-installed you should be able to download and install it through the Galaxy Apps store. If you are using a Galaxy S6, Galaxy S6 Edge, Galaxy Tab S2 or Tab S, you already have it.



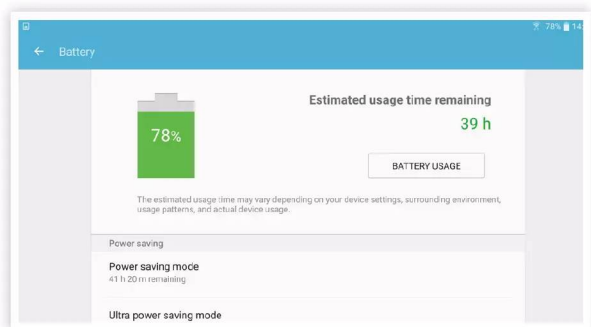
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Tap the icon to open Smart Manager and you will see a fairly simple interface. The four main areas of the app are: Battery Remaining, Storage Used, RAM Used and Device Security. At the bottom of the screen you will see a button labelled "Clean All" which allows for quick device optimisation.



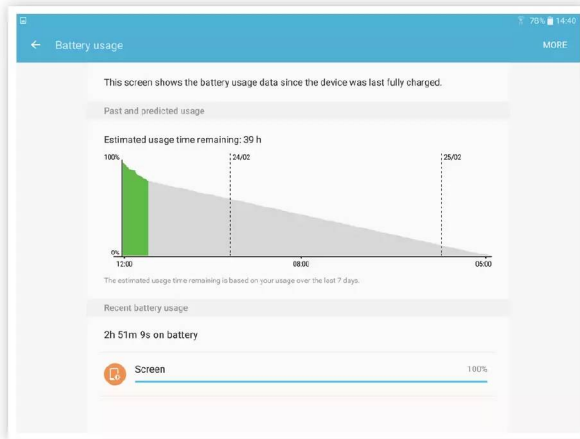
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Each of the sections, when tapped, leads to a new screen showing more detailed information and usually more optimisation options and advice. You can watch in real time as the battery drains or the RAM is used by background apps and services (if you have nothing better to do...).



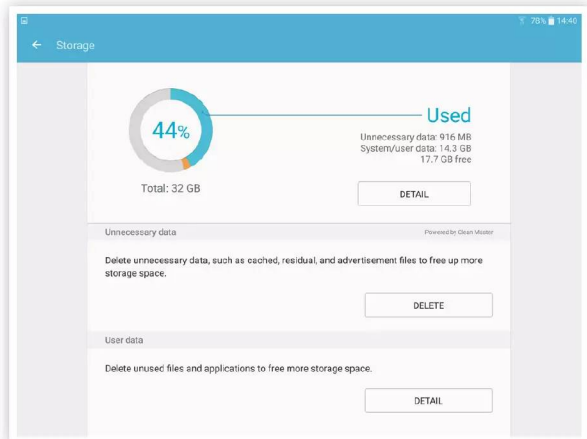
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Tap the Battery section to see more details about battery usage. The top section of the next screen shows current battery percentage level on the left and estimated usage time remaining on the right. Estimated usage time remaining is based on an estimate and will be affected by heavy use.



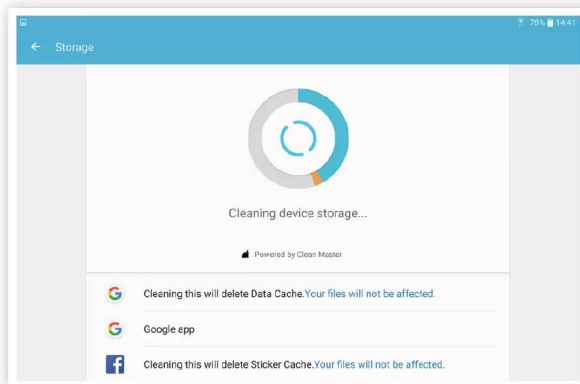
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Tap the “Battery Usage” button to see even more detail, including which apps or services are draining power. On this second new screen you can even tap the battery users and see advice on how to reduce usage. Go back and if App Optimisation is switched on, the number being optimised is shown.



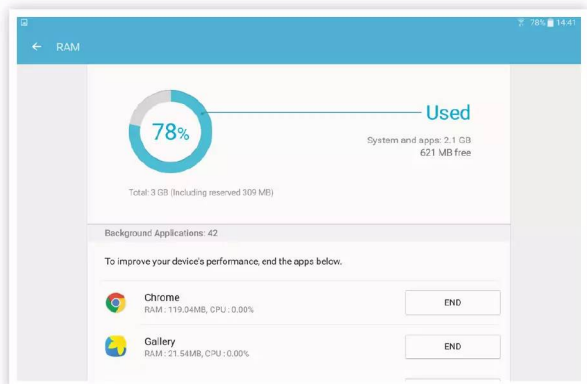
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Go back to the main screen and tap the Storage section. The percentage readout will update to show the current amount of used and free internal storage. You can tap the “Detail” button and your storage will be shown as a bar graph, split into various categories including Available Space and System Memory.



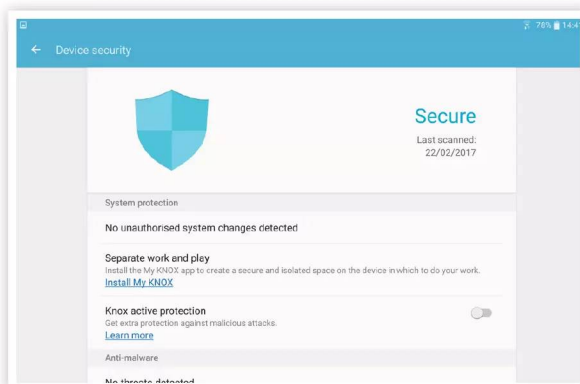
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Go back to the Storage screen and you will see a “Delete” button. Tap this to quickly delete unnecessary data, including residual and advertising files. Depending on your device usage this could clean out several hundred MB of unwanted data and files. The full amount is shown when deleted.



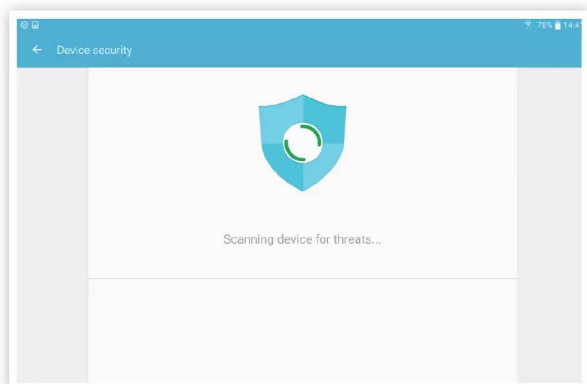
8

Go back and tap the RAM section. You can see how much RAM (Random Access Memory) is being used at this moment. RAM is important to the smooth running of your device as it helps keep apps and services ready to use. Tap “End” next to any apps you don't need running to free up RAM.



9

The First time you use Smart Manager, Device Security may not be activated. Tap the Security section and agree to the terms to activate it; you can also do this though Settings. Hopefully it will now show your device is “Secure”. You can scan the device for threats using the button at the bottom.

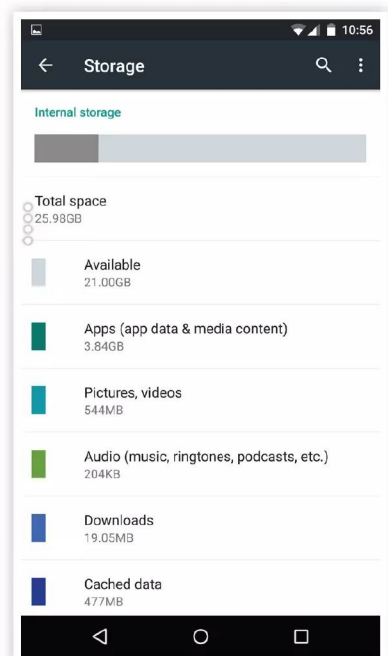
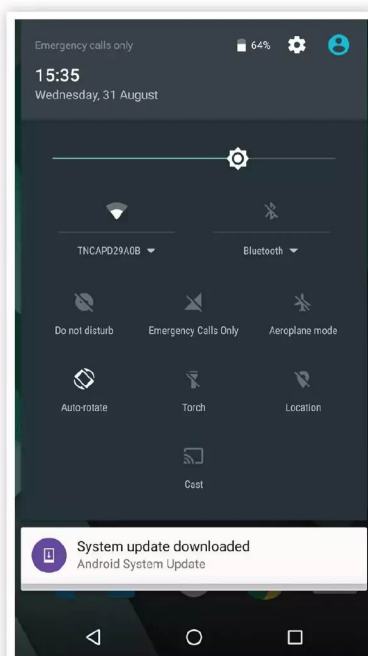
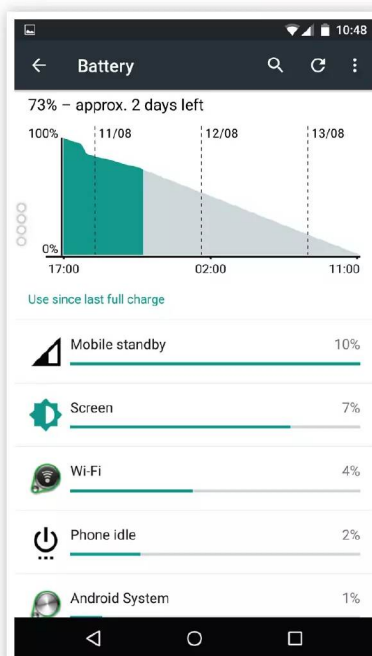


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You can also activate Knox Active Protection for an extra layer of device security. Knox Active Protection, or KAP, uses both Real-time Kernel Protection (RKP) and DM Verity, a feature that provides integrity checking for system code and data, to protect your device data.

10 Common Problems Solved

Android has been blessedly free from any major problems for a long time, as the software continually improves and Google seems happy to listen to comments and suggestions from its massive user base. Where problems can still arise, however, is when the excellent software is not paired with excellent hardware. Let's take a look at some of the most common Android software and hardware problems, and ways they can be solved.



1. Battery Drain

The easiest way to quickly reduce battery drain is to switch off a few power hungry features such as GPS (location) and Bluetooth, reduce the screen brightness and restart your device. This should see an immediate improvement in battery life. Some devices also now include battery saver modes, allowing you to reduce functionality for a short term increase in battery life. These are, however, generally designed as emergency measures, not day to day solutions.

You can read more about way to save battery power elsewhere in this book, and the application of a few or even one of these measures should help. If you are still having problems lasting the day on a full charge, then consider buying a new battery (if your device allows battery replacement).

Lollipop offers users a detailed look at what is using the battery power on your device. Just look in Settings > Battery, and tap on each entry in the usage list to see possible fixes.

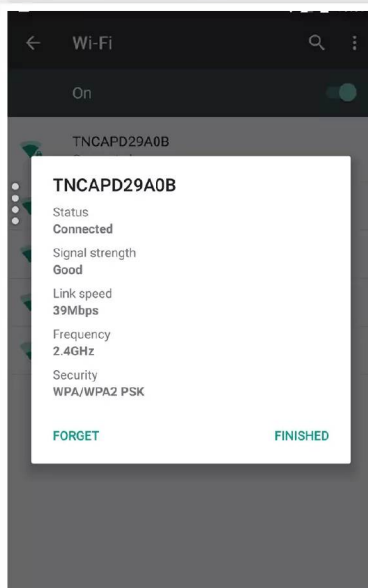
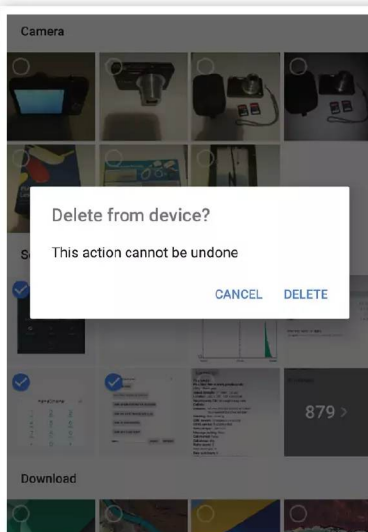
2. Lack of Storage

The easiest way to solve a lack of storage space on your phone or tablet is, obviously, to remove some old content such as apps, photos or videos. You can easily remove apps by going to Settings > Applications, selecting the app from the list and tapping the "Uninstall" button. You can also uninstall apps by tapping and holding on the icon in the main app drawer, and then dragging the app icon up to the uninstall icon that appears.



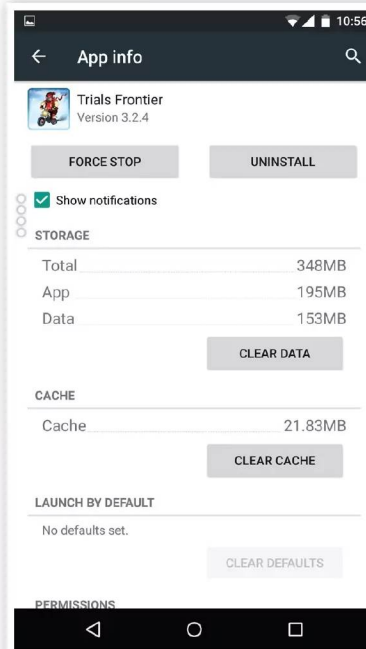
Photos and videos can be deleted from within the Gallery or Photos app, depending on your device. In both cases, tap and hold on the first image you want to delete, then select any others using the selection screen. Once you have all of the photos and videos selected that you want to delete, tap the Trash button or select "Delete".

Some devices, particularly phones, will allow you to expand storage space by inserting a MicroSD card. There may already be a MicroSD installed in your device, but it is unlikely to be the largest capacity the device can work with (check the manufacturer's instructions or website for maximum MicroSD capacity). This fairly cheap option could double or even treble the available storage space on your device.



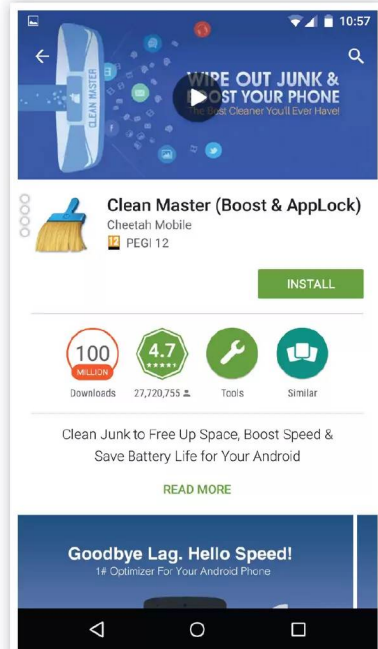
3. User Interface Lag

The main thing which will most likely be causing your phone to slow down and lag is a full or almost full internal storage drive. You can start fixing this by deleting unused apps and photos, or moving them to the cloud or a microSD card. Additionally, you should limit the use of live wallpapers and close open apps that you are no longer using. Another good thing to do is to delete app cache.



1

Any app's cached data can be deleted by going to Settings, clicking on Apps, selecting an app from the main list, and then choosing the "Clear cache" option.



2

Programs such as App Cache Cleaner and Clean Master, both of which are available for free from the Google Play store, can also be used to automate the cache cleaning process.

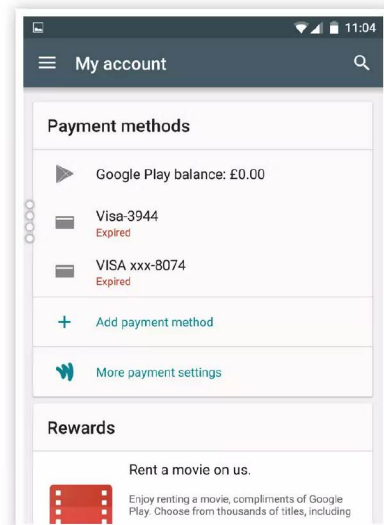
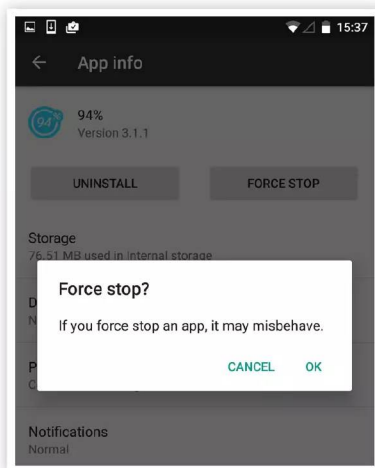
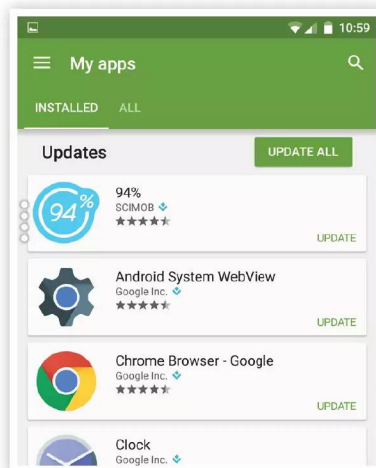
4. Wi-Fi Connection

Anytime your device needs to connect to an external device (such as a Wi-Fi router or Bluetooth peripheral), the chances of encountering problems is increased. If you are having problems with your Wi-Fi connection, the first step to take is to reboot the device that's having trouble. You should also try rebooting the router it's connected to if that hasn't been restarted recently. Follow manufacturer instructions for rebooting your router. If that doesn't work, make sure that the router's firmware is up to date. This process will vary based on make and model, Instructions likely came in the router's box though they can also be found online.

If those steps do not work, you need to look at the Android device Wi-Fi settings. Once there, force the device to forget the Wi-Fi network. Simply tap on the desired network and a menu will pop-up. Tap "Forget network".

Select that and then re-enter the password to connect again. If that doesn't work, try changing the frequency in the Advanced menu. Go to Wi-Fi frequency band and play around with the different settings. It should be set to Automatic by default. If none of those fix the Android Wi-Fi problems, try updating applications or entering Safe Mode to try and single out problem apps. If that doesn't work, it might be time to factory reset the device.



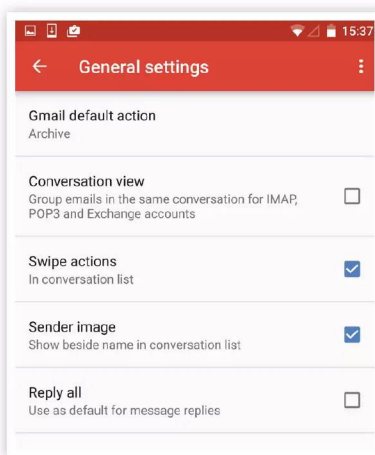
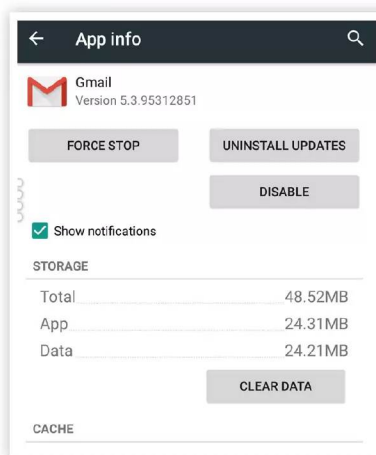


5. Apps Crashing

If apps are consistently crashing during operation, the first thing to do is to check for any available updates for those apps. You can do this by opening the Google Play Store app, tapping the Menu button and selecting “My apps”. Here you will see a list of all apps which have updates available, and be able to tap to update.

If there is no update available for the app that is crashing, it is worth either uninstalling the app and then reinstalling it. Alternatively, open the main settings, click “Applications” and find the problem app in the list. On the app info screen, clear both the app data and the app cache. Tap “Force Stop”. Now head back to the home screen or main app drawer and open the app to see if the crashes have stopped.

If the problem persists even after these steps, there may simply be a problem with the app (rather than a problem with your device). If you really want to dig deep, install a System Monitor app (System Monitor Lite is great for this) and see if the app is showing any resource spikes. If so, this could be causing the crashing, and indicates a problem with the software.



6. Sync Errors

If it seems that an app such as Gmail or Dropbox isn’t syncing properly, the first thing to do is to check that the app in question is working and fully up to date. You can check for updates for apps by opening the Google Play Store app, clicking “My Apps” in the menu and checking the update list. Apply any available updates and check to see if that fixes the sync problem.

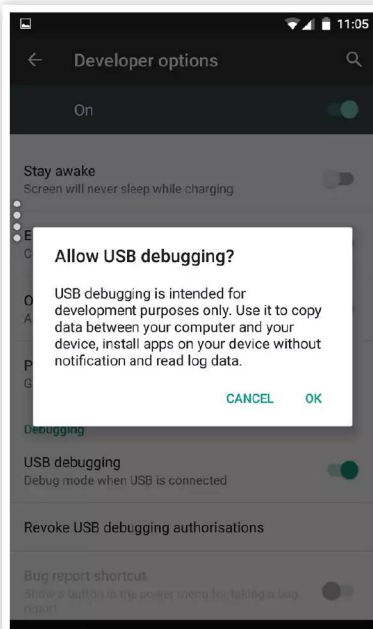
If not, you can try clearing the app cache and data. This will usually mean that you will have to sign in to the app again, but it should fix persistent sync problems. Open the apps in question and check that the individual sync settings are correct. You can also check sync settings for all of your Google apps, as well as things like Facebook and Instagram, in the Accounts section of the main settings.

7. Play Store Problems

Although it is thankfully fairly uncommon, some apps on the Play Store are only compatible with specific types of Android device. View the Play Store on your Android tablet and you will see a subtly different selection of apps compared to when you view the store on your Android phone. Generally, apps which aren’t compatible with your device won’t even be displayed. This is not the case when viewing the Play Store on a computer. Here you will see all apps, but will need to check the compatibility notice just below the Install button.

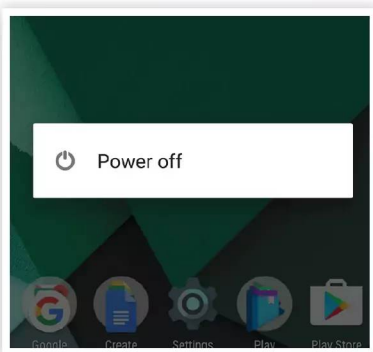
If you receive a “Download unsuccessful” message when attempting to download an app, try the following troubleshooting steps to resolve the issue:

- For paid applications, confirm your credit card information is up to date by signing in to your Google Wallet account.
- Clear the cache of the Google Play Store app (visit Settings > Applications > Clear cache).
- Restart your tablet, then try downloading the app again.
- Confirm there is connectivity to either a wireless or cellular network on your device, and contact your mobile service provider if you aren’t connected.
- Ensure there’s enough space on your tablet for the app to install.
- If none of the above steps work, try remounting your SD card, if your tablet has one. Tap Menu > Settings > Storage > Unmount SD card; then remount the SD card from the same menu by selecting Remount SD card, or restart the device if the remount option isn’t available.



8. PC Connection Fails

Even though Android devices are (in my opinion) almost trouble-free, some of you (in most cases users of Windows) report USB connection problems. There are a few different symptoms of Android USB connection problems. The most often problem is that you can't transfer files between your device and your computer or manage your device through your computer. If you are experiencing any problems connecting your Android device to your PC, these are the steps you should follow.



9. SD Card Unrecognised

This can potentially happen at any time, even with a fairly new SD Card. Try formatting the SD card from within Android. This solves some of the issues with SD cards, and if you haven't tried it yet, it is worth attempting.

To format an Android microSD card, go to Settings > Storage and scroll down to the bottom and select "Format SD card". Then select "Format SD card" again. If this fails, you will need to connect the SD card to a PC with a card reader. If your files aren't readable after connecting to a PC, you may have more luck using data recovery software.



Restart Your Device and PC

If you've been using your computer or Android phone for a long time without restarting, they may be simply overloaded. That's why the first thing to do is to restart your computer and then restart your Android phone.

Update Your Android Device

Sometimes there may be some bugs in the software and updating your Android version may indeed help. This is particularly true if you are using an older version of Android with a new version (8.1 or 10) of Windows.

Update Your PC

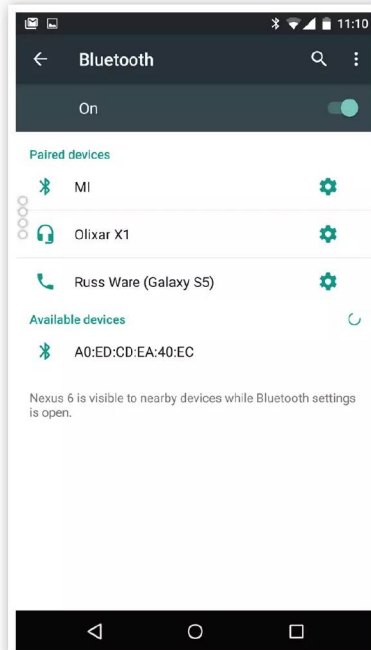
Sometimes outdated system (most often Windows) will not recognize any Android device (or any USB device). That's why it's always a good idea to update your system, particularly the USB drivers. Remember not to install too many updates at the same time (not more than two or three).

Try Debug Mode

This is the mode intended for developers. It allows you to directly access your phone, transfer and install apps without notification. To activate debug mode, go to Settings > Developer options > and check USB debugging. Plug in your device. If Developer options aren't unlocked on your device, open Settings > About Device and tap the "Build Number" heading 10 times.

New USB Cable

Android USB cables will undoubtedly become damaged or worn over time, so it is certainly worth trying to connect using a different cable if you have one available. If not, you can buy replacement Android USB cables online or in electrical stores for little money.



10. Bluetooth Connection

If you are dealing with Android 5.1.1 Bluetooth issues, first try switching the Bluetooth off and on. This is a simple fix but it is known to work for many users. After that, if the problem persists, try clearing the cache on Bluetooth Share. To do this, head into Settings > Apps > Scroll over to All > Select Bluetooth Share > Clear Cache. After doing this, power down the device and boot back up.

You can also try to Clear Data from the same screen. This will cause the Android device to forget all known Bluetooth devices, and allow you to essentially start scanning for them from scratch.

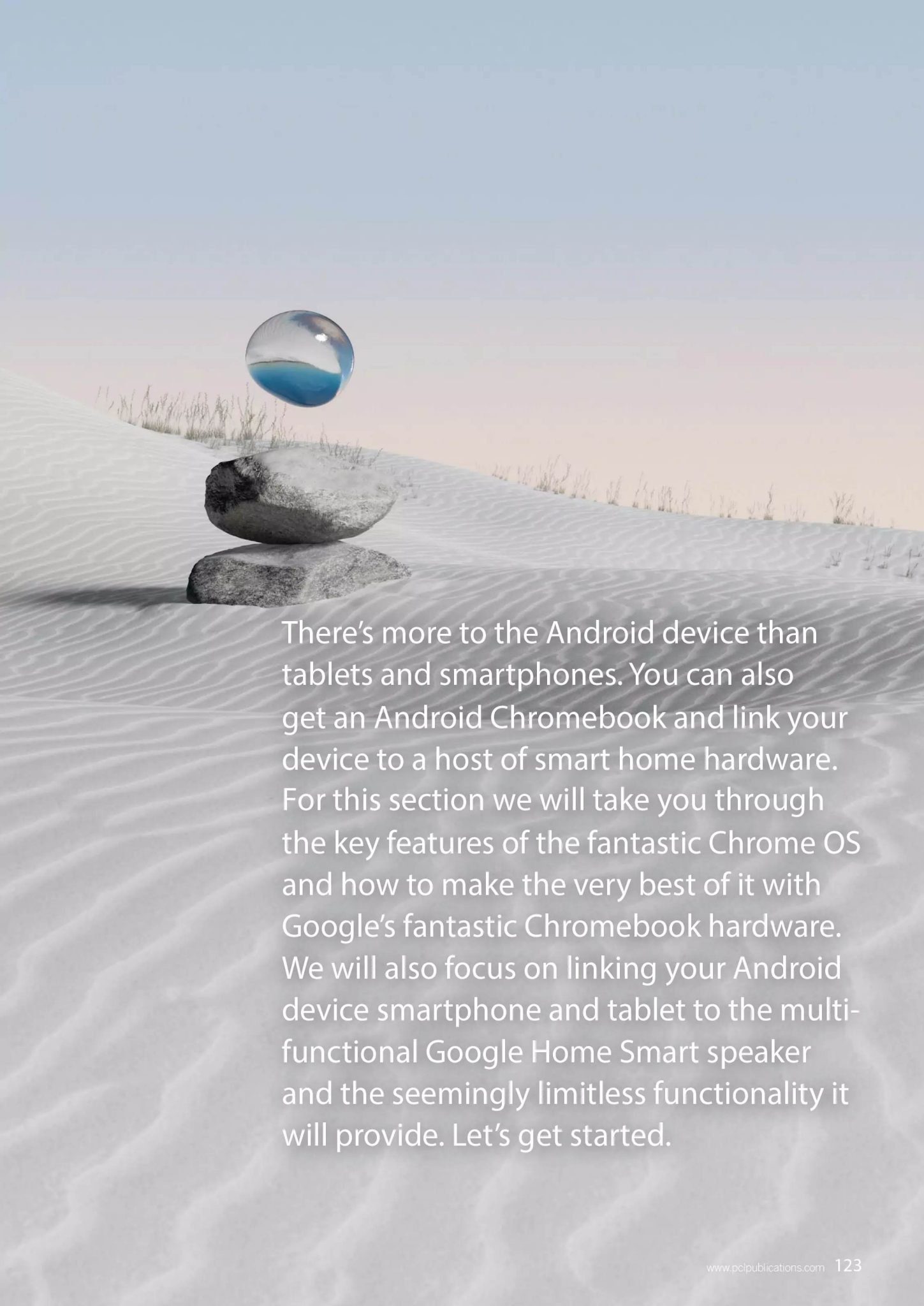
If none of the aforementioned fixes work, try booting into Safe Mode. To do this:

1. Ensure your device's screen is on, then press & hold the Power button.
2. Touch & hold the Power off option in the dialogue box.
3. Touch OK in the following dialogue to start safe mode.

Users trying to connect to Bluetooth in a car will need to consult the car's manual to reset the car's Bluetooth connection, as the process is going to be different for each make and model. Once that connection has been reset and the connection's been forgotten on the device, try reconnecting.

A large sand dune with ripples in a desert landscape under a clear sky. The dune is covered in fine, wavy lines of sand, and some small, dry grasses are visible on the left side. The sky is a pale blue with a soft gradient.

Additional Devices & Hardware



There's more to the Android device than tablets and smartphones. You can also get an Android Chromebook and link your device to a host of smart home hardware. For this section we will take you through the key features of the fantastic Chrome OS and how to make the very best of it with Google's fantastic Chromebook hardware. We will also focus on linking your Android device smartphone and tablet to the multi-functional Google Home Smart speaker and the seemingly limitless functionality it will provide. Let's get started.

What is a Chromebook?

When is a laptop not a laptop? When it's a Chromebook! Confused? Don't worry, technology has a habit of introducing confusing terms and elements, but once you've finished reading the following, you'll know the difference.



The Chromebook

Without beating around the bush too much, and in very basic terms, a Chromebook is a laptop that runs Google's Chrome OS (Operating System). There can be subtle hardware differences between a laptop that is installed with Windows 10 or 11, and even a MacBook with the latest macOS, but essentially that's all there is to it.

The first Chromebooks were commercially sold in June 2011, with several different models from laptop manufacturers Samsung and Acer, in partnership with Google. From then, the humble Chromebook has evolved and is now as widespread as any other OS-independent computing device; in fact, Chromebooks outsold Apple MacBooks during the first lockdown in the Covid-19 pandemic of 2020.

There are also different Chromebook variants. There's a desktop variant, called the Chromebox, which is more of a traditional mini-PC type device that runs Chrome OS. This you'll hook up to a monitor, keyboard and so on in the same way you would a normal desktop computer. There's an all-in-one model, called a Chromebase, which integrates the Chrome OS into a monitor complete with webcam, memory, storage and such – much in the similar vein as an Apple iMac. And finally, there's a dongle-based variant, which plugs directly into a TV or monitor's HDMI port – with power supplied via a USB port – providing you with access to Chrome OS. This variant, as you

can imagine, is similar to the ROKU TV stick, or Now TV Smartsticks. By the way, the Chromecast doesn't run Chrome OS, so on paper it's not really classed as a Chromebook variant, in case you were wondering.

Hardware

One of the main differences between a Windows laptop, or even a MacBook, and a Chromebook is the hardware involved. Traditionally, Chromebooks tend to be less powerful than a Windows laptop, in terms of processing (CPU) power, the amount of memory (RAM) installed, and the amount of storage (Hard Drive space available).





Why, you may ask, well simply put, the Chrome OS that runs on a Chromebook requires significantly less hardware resources than Windows 10 or 11, or macOS. This of course means that a Chromebook can get away with using less processing power and other system resources, which in turn means that a manufacturer can get away with producing a device that doesn't utilise the latest and most powerful technology – so the cost is, in general, less than a equally matched Windows laptop.

However, there are some instances where this isn't the case. More recent Chromebooks, developed by some manufacturers, are more in line with Windows laptops in terms of power. There are Chromebooks that use the latest generation Intel i7 processors, up to 16GB of memory, and many gigabytes of storage. Naturally, as with most computing hardware, the more system resources you have to hand, the better overall experience you'll have when working with the installed operating system and any apps or programs you use. These are the more extreme models, but as hardware naturally drops in price, expect to see more powerful models appearing as time moves on.

Working Online

One of the most notable features of a Chromebook, due to Chrome OS, is that its main functionality is conducted online. An always online element is needed to get the most from a Chromebook, as Chrome OS itself is based on the Chrome browser, so most everything you do on a Chromebook is done online.

This explains a Chromebook's usual lack of on-board storage. Where a traditional Windows laptop or MacBook could have a terabyte or more of available storage, a Chromebook can get away with as little as 32GB. The main operating system is stored on the Chromebook's internal storage, along with any installed apps, and something you may be working on, but the vast majority of the Chromebook's use will be via cloud storage and online functionality.



For example, you won't be installing the full Microsoft Office suite on a Chromebook. There are free, open-source Office-like productivity apps available, but for those who need an actual MS Office experience, you'll be using Microsoft's online version of its productivity suite.

Advanced photo and video editing duties will require the use of a Windows laptop or MacBook, too. Yes, there are photo and video editing and manipulation apps available for the Chromebook, but they aren't nearly as powerful as what's available for the aforementioned systems. Plus, Chromebooks won't, in general, offer the same graphical power needed for higher-end editing.

Gaming is another element that may not be as you expect on a Chromebook. Again, due to a lack in gaming hardware performance, and the fact that many games are Windows-developed, you won't be able to enjoy the latest releases. But, with a Chromebook, you are able to enjoy the latest game streaming services – such as Google Stadia or Xbox Cloud Gaming – and since Chrome OS is also able to use some Android apps successfully, you can enjoy a wealth of Android-based gaming entertainment.

Despite all that, Google has improved Chrome OS's need to constantly rely on an always-on internet connection. There are many aspects of the OS now that mean you can still use most of the Chromebook's functionality offline. So those times when the internet goes down, or you're on a busy commute and unable to connect, you won't be completely scuppered.

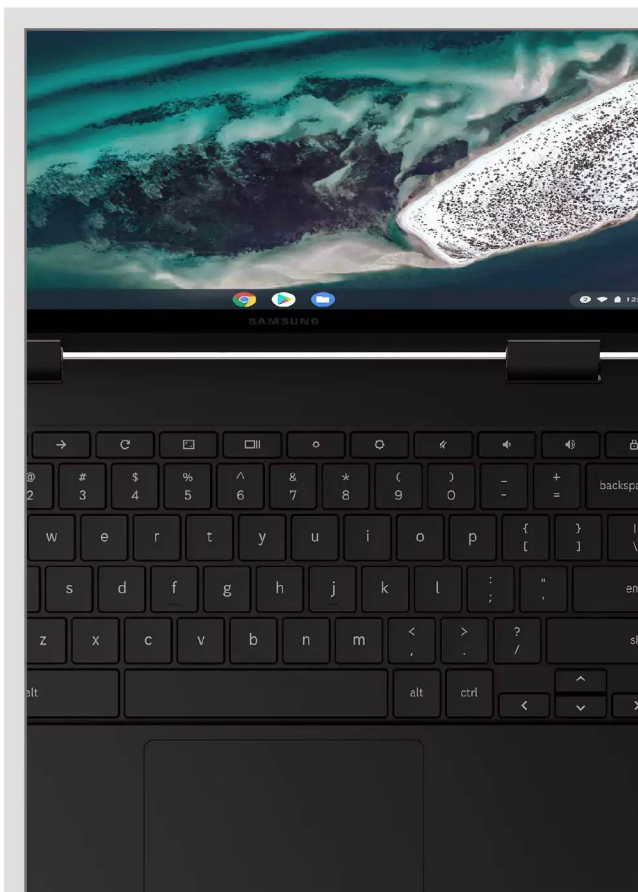
What is a Chromebook good for?

While some of the above may cast a Chromebook in a less than positive light, it's worth mentioning that there's so much you can do with a Chromebook.

As we mentioned earlier, Chromebooks outsold MacBooks in 2020, during the pandemic. This is due mainly to the fact that Chromebooks are cheaper, they're used frequently in schools and colleges (so students at home are used to how they work), and most everything we tend to do, we do online.

For example, working remotely: we access our work's server, get the files we need, create new ones or edit old ones, connect to and conduct meetings, send emails, update calendars, use spreadsheets... and so on. All of which are done online, and most of which are done using Google's own inherent applications. Even if the company you work for doesn't use any specific Google apps, they often provide remote access to Microsoft Office apps, which also include Teams, SharePoint, and One Drive. All this can be done via a Chromebook.

This makes a Chromebook both an effective work and educational tool. And thanks to its low price and low power use, also quite a cost-effective device for every member of the family.



WHY DOESN'T A CHROMEBOOK HAVE ANY STORAGE?

Many people will naturally require the more power, and functionality of a Windows laptop or MacBook. Tasks such as video and image editing, even gaming, and the like are going to be better overall on a more traditional laptop device. If though your needs aren't as specific, then a Chromebook could be the ideal device.

An effective approach to seeing if a Chromebook is the right choice of device for you is to make a quick summary of what you use a computer for, and what you may need in the foreseeable future. Take a moment to slowly go through the steps of your everyday tasks: logging into work, looking at videos and images, even going through social media. If a high proportion of these tasks, or even all of them, can be done via a browser, then a Chromebook is the ideal device companion.

If a high percentage of what you do can be done via the browser, do some research into the remaining tasks that exist outside of the browser. See if there are apps available via the Google Play Store that will do the same thing, or if you use a specific app, check with its product webpage to see if the company has developed a Chrome OS version of the app you use. If all the boxes are ticked, then get yourself a Chromebook.

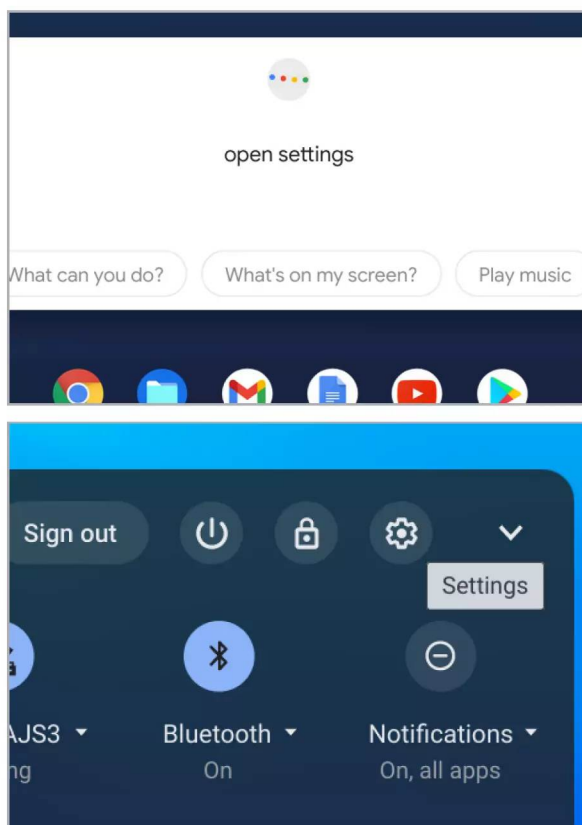


Personalising Chrome OS

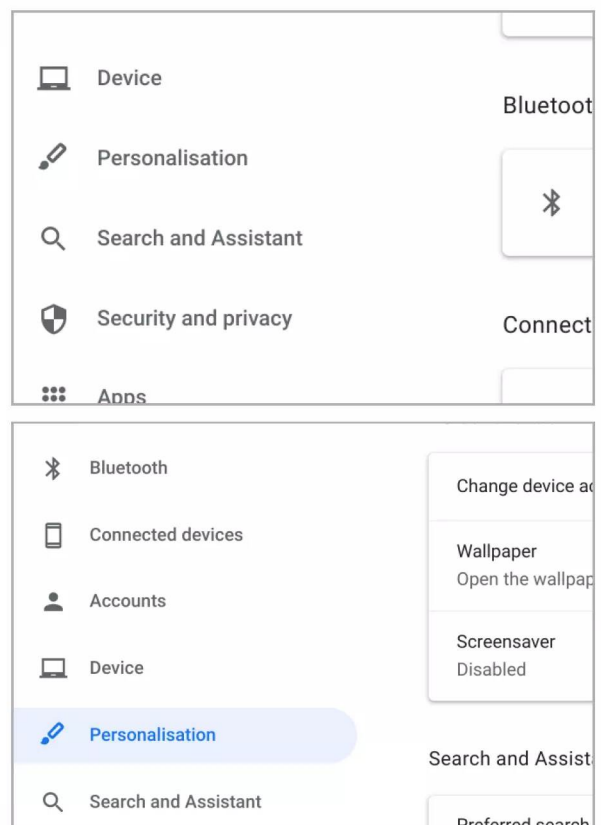
Personalising your Chromebook's desktop, and the way it behaves, is something only you can do. However, within the following pages we'll look at some of the key changes you can apply to make Chrome OS your own on your Chromebook.

How to Access The Chrome OS Settings

You can accomplish most of the main personalisation of Chrome OS from within the, wait for it... Personalisation section in the Settings menu. You can get to the Settings page by one of two ways:



To start simple say 'Hey Google, open settings' in range of your device. Providing you've got the Android device Chromebook plugged into a power source and your battery is live, the Google Assistant will automatically open the main Settings Page for you, as shown below. Alternatively click on the power, Wifi and time icon in the bottom-right of the desktop. When the information menu opens, look to the cog icon in the top row, and click it. Either method will take you to the Settings page. In here are all manner of tweaks and adjustments.

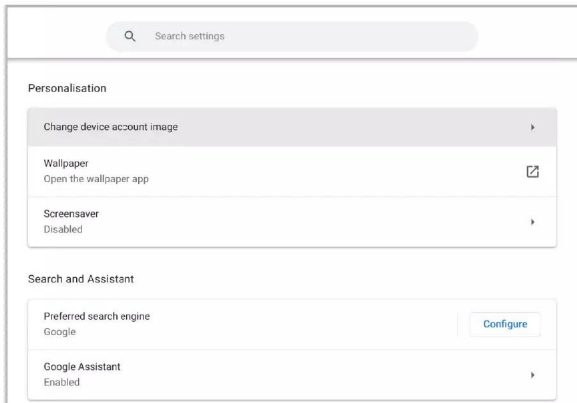


Here you can make alterations to the core of Chrome OS and your experience when using it. Use it with caution, though. While nothing too bad can come from most of these settings, some could cause you problems, and others will wipe your account off the Chromebook for good. What you need to do now is look to the left-hand pane to locate Personalisation. Click on the Personalisation title, and the main page will change its display. Now let's have a look through what's available within here.

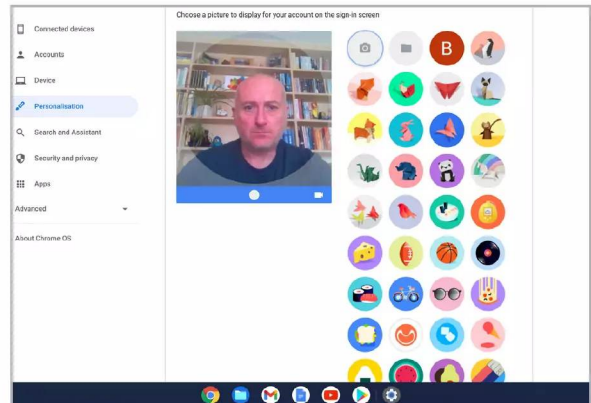


Change Device Account Image

You'll probably want to change your Google account image. If you're new to Google, then you'll likely just have a letter, or even a solid colour. But you can change it to whatever you want – within reason, of course.



The first step is to click the top option within the Personalisation page: Change Device Account Image. This will change the display of the main panel. You can click any of the default images, which will change the main, large image that's displayed next to them. However, if you want something more personal, click the Camera icon. This activates the Chromebook webcam, and you can take a picture of yourself. As you'll see from the new display, there's a lot you can opt for in terms of having a new account image. You can choose anything

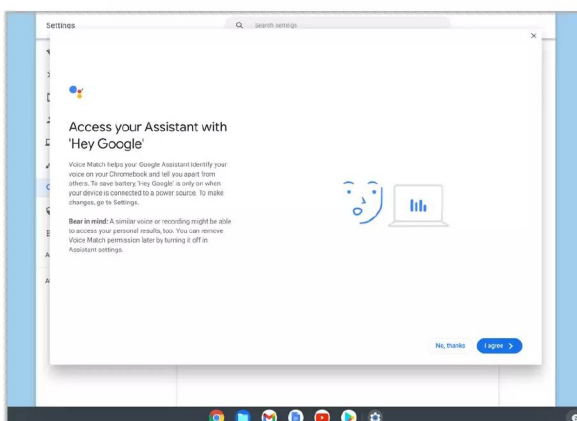


from a cartoon graphic of an animal, through to your own unique image. Alternatively, you can click the Folder icon (next to the webcam option), and choose an image file you may already have stored on your Google Drive, or stored as an attachment to an email. You may need to download the image to the Downloads folder in Chrome OS before being able to add it as the Account Image, however. When you're done, click on the left-pointing arrow above the image, to return to the main Personalisation page again.

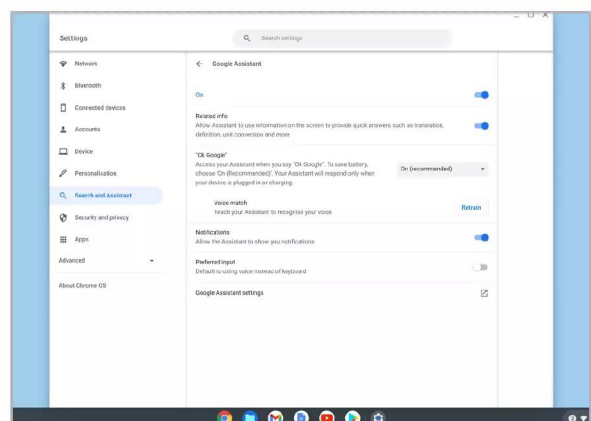


Search and Assistant

You can opt to choose your default search engine, and further improve, or retrain the voice recognition of the Google Assistant.



There are only two options in the Search and Assistant category within the Personalisation page. The first details changing the default search engine from Google to either Bing, or Yahoo! Click on the Configure button to make the choice. Clicking the Google Assistant option will open up a varied set of new options. You opt to use the Google Assistant, provide related info on the screen when dealing with your query, and whether 'OK Google' is active only when the Chromebook is plugged in to save on power.

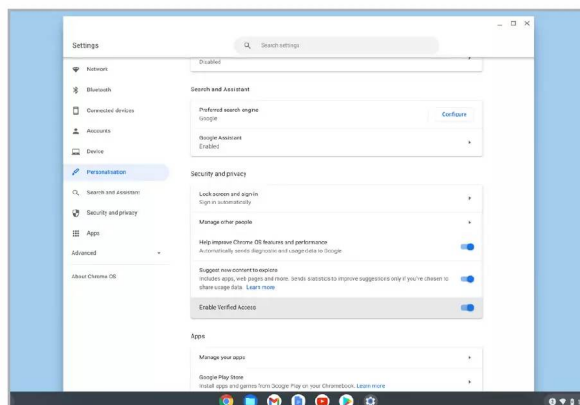
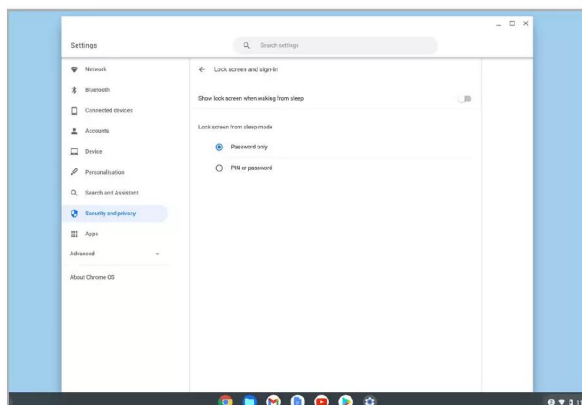


The Retrain option is always worth exploring if you find that the Google Assistant is beginning to ignore you, or picking up someone else instead of you. Click the Retrain button, then agree to the use of the Google Assistant and from there follow the on-screen instructions. The last item in this section enables you to further improve the results from your questions. Click on the Google Assistant Settings link at the bottom of the section. Within here you can choose options such as your preferred temperature unit, the language of the Assistant, and what Services are being used.



Security and Privacy

Securing and making your Chrome OS account as private as possible are some of the first options you should look to. Here's how you can improve both.



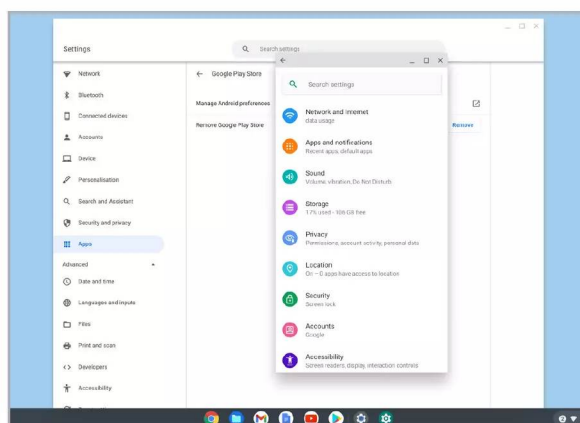
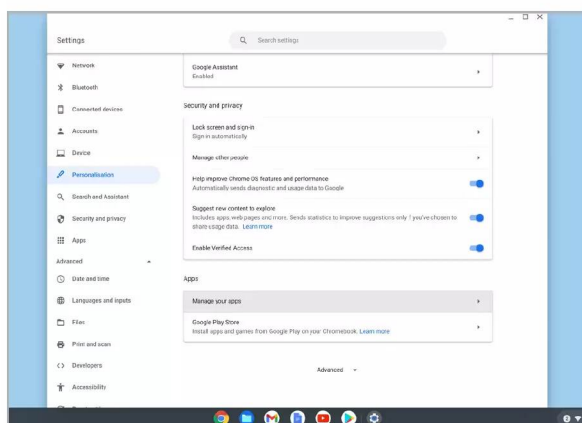
The first option here is configuring the Chrome OS Lock Screen and Sign-In. Click the link, and you'll be asked to enter your Google Account password to continue. You'll then be able to activate the Lock Screen when waking from Sleep Mode, and choose whether to unlock the Chromebook with the password, or a combination password and PIN. The next two options in the Security and Privacy category detail the use of Chrome OS to send diagnostic and usage data to Google to help improve features and performance, and to allow the OS to suggest new content for the user to explore. You can opt to enable or disable both options.

Manage Other People is a Security and privacy option that allows you to enable or disable the Guest account, display Chrome OS usernames and Account Images at the sign-in screen, and the ability to restrict sign-in to Chrome OS to certain users. The last option, Enable Verified Access, sounds a little misleading as you would expect it to only enable access to verified, Chrome OS, accounts. However, it is used to identify machines and users for proprietary or licensed access for enterprise and media. It's recommended to leave this enabled in the panel by default.



Apps

You can personalise how the Apps installed on your Chromebook are handled too, including apps downloaded and installed via the Google Play Store.



There are only two options available within the Apps category of the Personalisation section: Manage Your Apps, and, Google Play Store. Start by clicking on the first option – Manage Your Apps. The Manage Your Apps section will list all the currently installed Chrome OS apps on the system. You can click each of the apps in turn to delve deeper into how they interact with the system, or to Pin them to the Shelf. Options within here include whether to enable permissions to access the webcam, microphone and geo location.

One of the best advances in Chrome OS is the ability to install and use Google Play Store apps. Although some are designed specifically for tablets or phones, most will run perfectly well inside of Chrome OS. Using the Google Play Store option, you can manage the Android preferences. Clicking Manage Android Preferences allows you to further drill into the specifics of the currently used Android Google Play Store apps installed in the system. It'll bring up a new window, with the list of apps that you can click and configure individually.

The Chrome OS Desktop

Ready to dive into Chrome OS and see what it can do? Let's take a moment to navigate the desktop and see what each aspect of it does.

1 Background/Wallpaper

As with any other operating system, Chrome OS features a customisable background, or wallpaper, for you to change and personalise. There are plenty available from within Chrome OS itself, including works of art, fantasy, and even solid colours; you're also able to include your own images.

2 Welcome Page

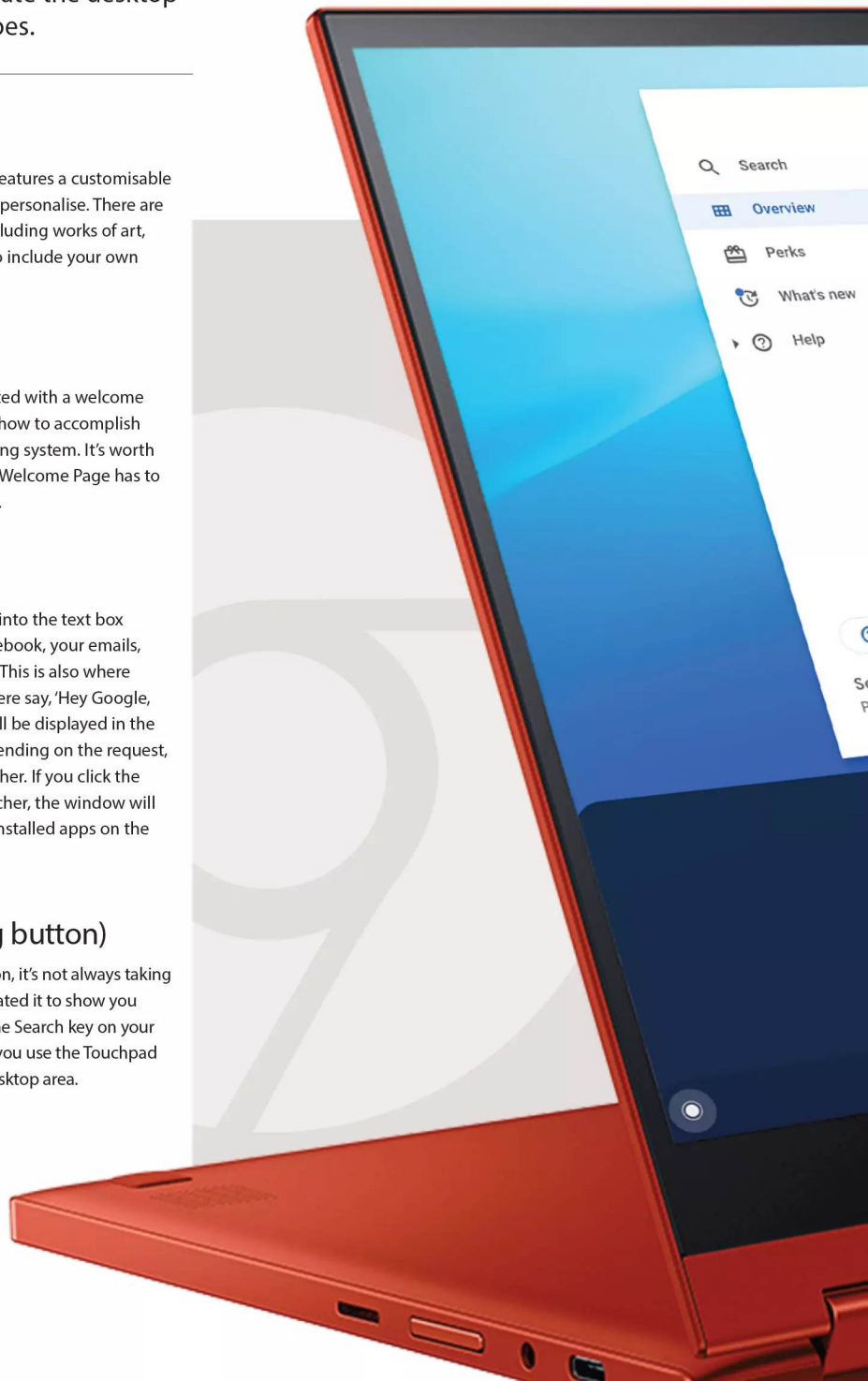
When you first log into Chrome OS you're presented with a welcome page. This includes details and quick tutorials on how to accomplish the most frequently used tasks within the operating system. It's worth spending a few minutes going through what the Welcome Page has to offer, to help familiarise yourself with the new OS.

3 Searching & Apps

Still within the Launcher, you can enter anything into the text box provided to search the files stored on the Chromebook, your emails, YouTube videos, and even the Google Play Store. This is also where any 'Hey Google' requests are processed. If you were say, 'Hey Google, what's the weather like tomorrow?', the results will be displayed in the Launcher – or opened as a separate window depending on the request, but the actual command is handled by the Launcher. If you click the up-pointing arrow at the top-middle of the Launcher, the window will fill the screen and you can view all the currently installed apps on the Chromebook.

4 The Launcher (Everything button)

This is called the Launcher, or the Everything Button, it's not always taking up so much room on the desktop, we simply activated it to show you what it looks like. To open the Launcher, you tap the Search key on your Chromebook keyboard (the magnifying glass), or you use the Touchpad to click the circle in the bottom-left of the main desktop area.



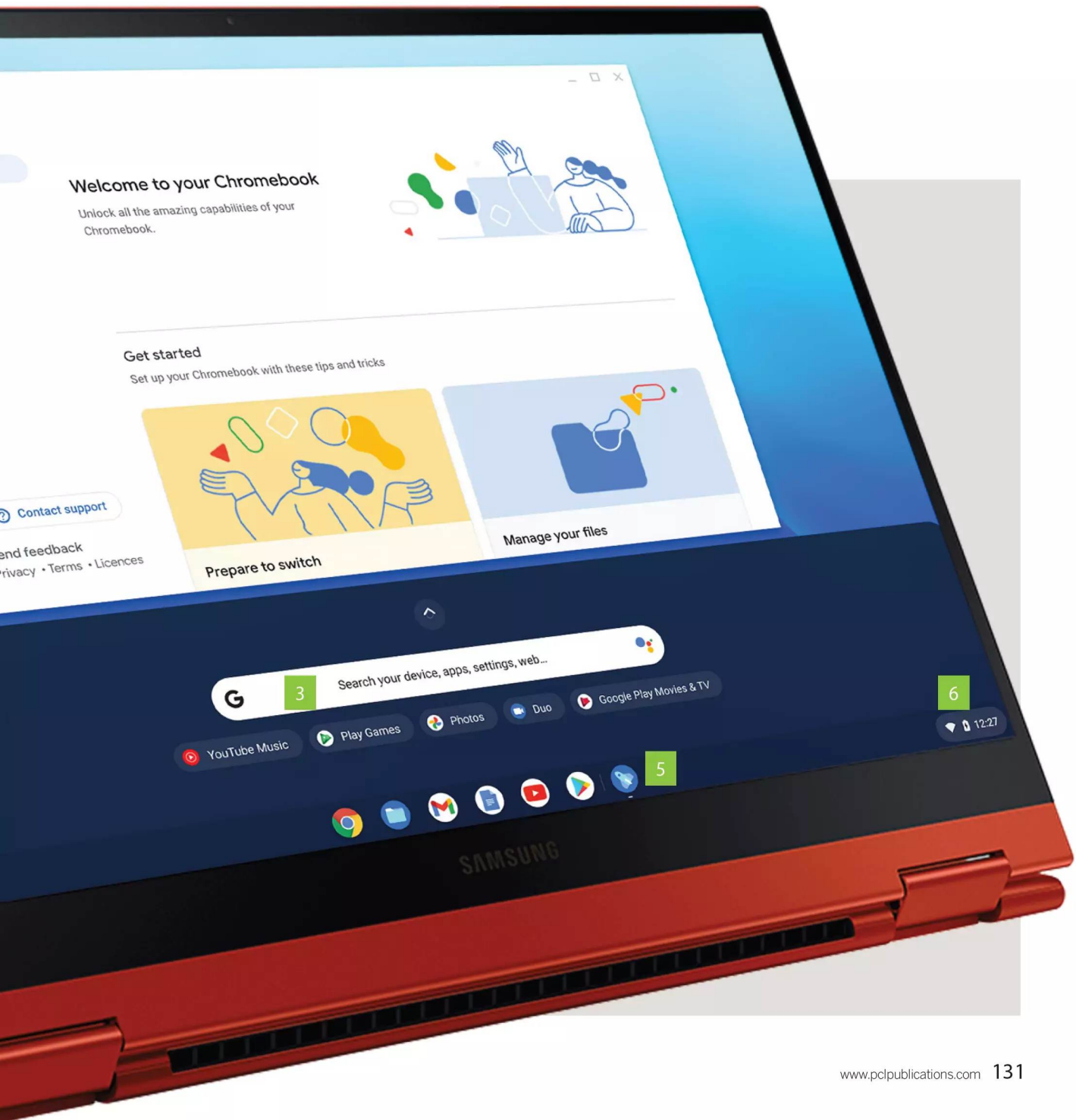


5 The Shelf

The bar below the Launcher is called the Shelf. This is a quick-launch app, file and folder shortcut launcher similar to that found on macOS, and some Linux distros. The default apps: Chrome, Files, Gmail, Google Docs, YouTube and the Google Play Store, can all be changed and removed, and it's easy to Pin new apps, files and folders, to the Shelf. The Rocket Ship icon, by the way, is the Welcome Page that's currently open on the desktop. Any open apps are displayed in the Shelf for easy access when you're switching windows.

6 Notifications, Settings, and More

The Wifi, battery level and time icons in the bottom-right of the Shelf can be clicked to reveal a lot more. In here you'll find any recent notifications you've not dismissed, your current profile image, the option to Sign Out of the Chrome OS as well as Shutdown or Restart the Chromebook. There are also options to lock the screen, enter the Chrome OS Settings pages, change Wifi network, enable or disable Bluetooth, capture the screen, turn the Night Light on or off, increase volume and display brightness.



Google Home First Time Set Up

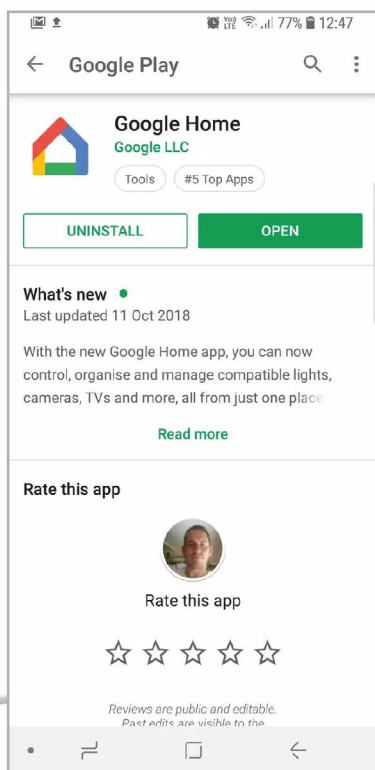
Setting up your Google Home device properly for the first time will make using it much easier, so take the time to get things right. You will need to have the speaker, an Android device, a Google account and a working Wi-Fi connection that both Android and Home devices can connect to.

Setting Up Google Home

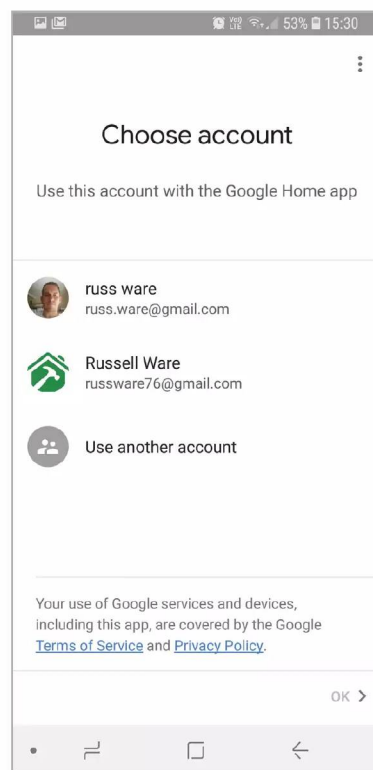
All of the setup for your Google Home speaker is done through the Google Home app for Android. Use this app for future access and changes to the settings.



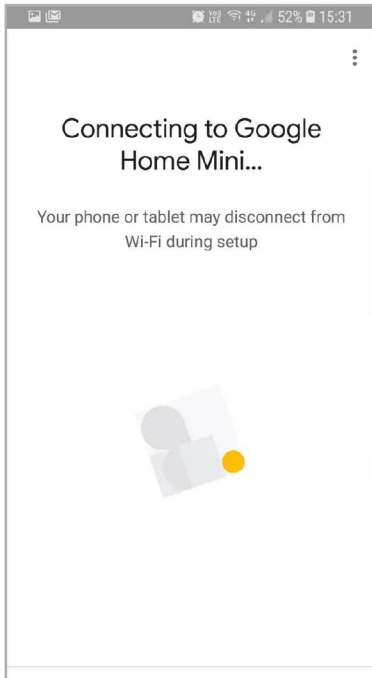
1 Plug in your Google Home device and wait for the audio cue to show it is ready to be set up. Make sure that the switch that controls the microphone is set to "On". If you accidentally turn the microphone off on your speaker, the device will inform you accordingly.



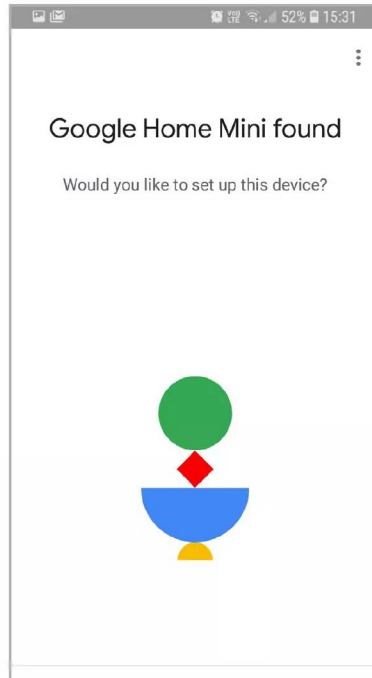
2 Currently, Google Home is only available for Android devices, and most have it pre-installed. If you don't already have it, find the app on the Google Play Store, download and install it on your mobile device (phone or tablet). Once installed, open the app.



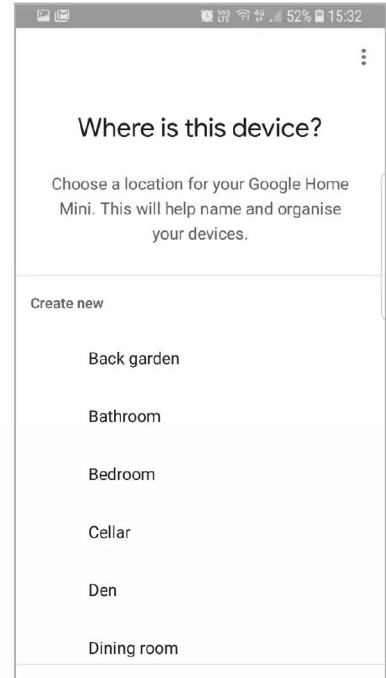
3 You will need to make sure that your mobile device is connected to the same Wi-Fi network you intend to use for the Google Home speaker. It won't work if you are using a 4G network to connect. Once connected, open the Home app and confirm which Google account you will use to log in.



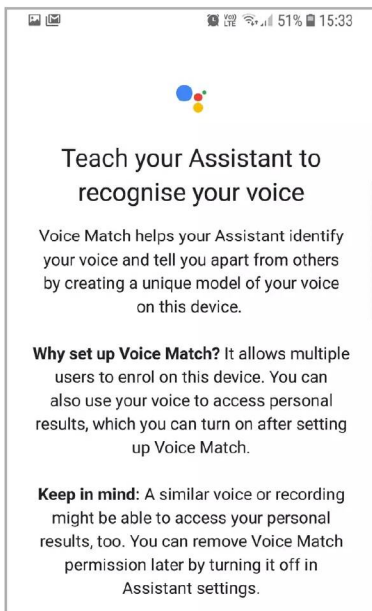
4 The Google Home app scans for nearby devices that are plugged in and ready to set up. If no devices are found, and you're setting up a device, tap Yes. Make sure that you're near the Google Home device that you're setting up and it's plugged into a wall socket. Then tap Next.



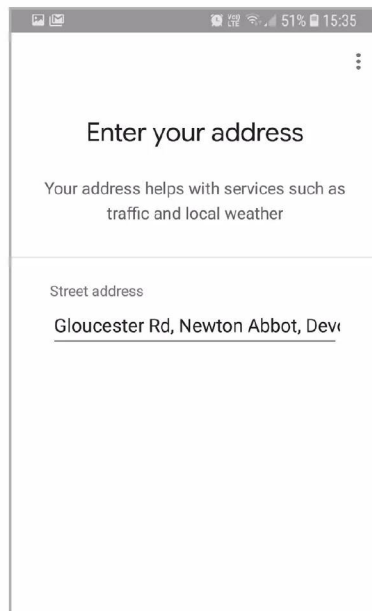
5 Hopefully your device will be found by the app, displayed on screen and you can then tap Next to continue. If you are setting up multiple devices, select the one you want to set up first, and then tap Next. The app will now connect your phone to your new Google Home ready for configuration.



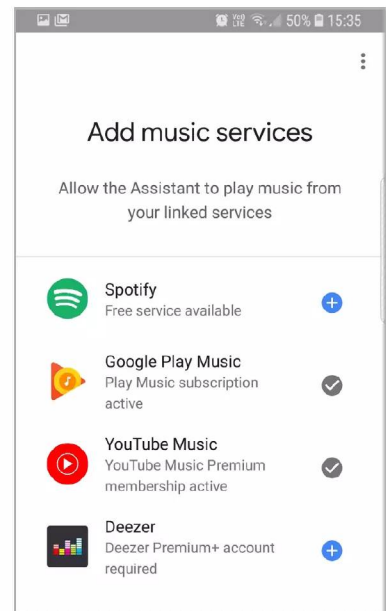
6 You should hear a sound on your speaker to show it is connected. You can now continue the setup by selecting the room it will be in (to identify the speaker), choosing your region, and setting the language you want to use. Next, you will need to connect to your Wi-Fi network.



7 Next, to improve your Google Home experience, set up Voice Match. Voice Match allows multiple users to use the same device and get personalised results. Follow the prompts on screen to teach Google to recognise you. You can remove Voice Match settings later if you wish.



8 The Google Home app will ask for access to use your location to pre-fill your address. This is the address where your device is located. If you allow access, your address will be pre-filled; otherwise, you will need to enter it manually. When your address is entered tap Next.



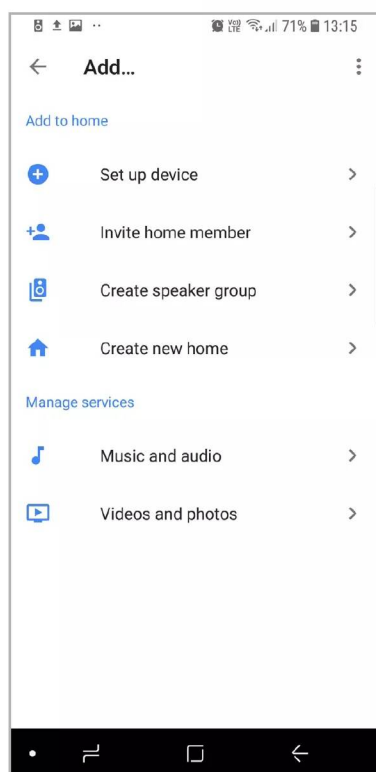
9 You can now add your favourite services, for example music. Spotify, Google Play Music, YouTube Music and Deezer are just some of those available. If you add more than one, you will need to choose a default music service. Follow the further on-screen prompts to complete the setup.

Listening to Music on Google Home

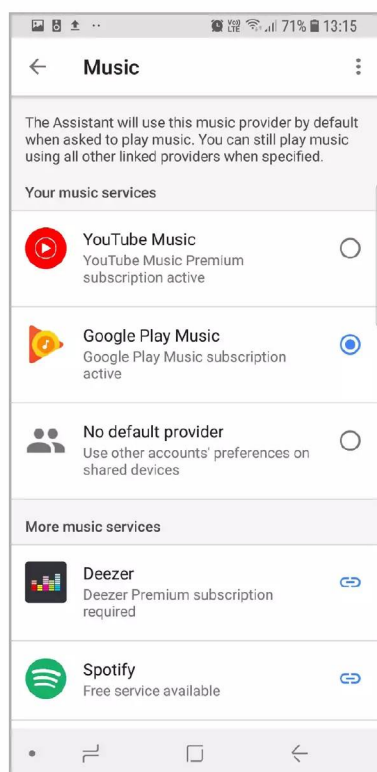
Listening to the music you want on Google Home requires you to set up the music services it uses. To do this you need to know how to ask the speaker to play, stop, pause, shuffle and skip the music you want! Let's take a look at just how you listen to music on Google Home.

Choosing Music Services

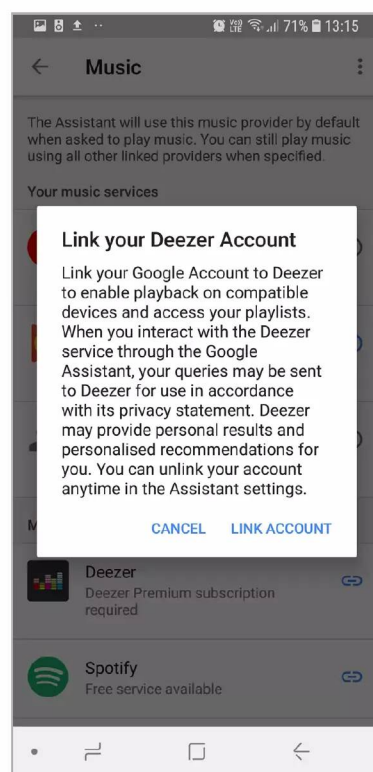
You can connect your speaker to a great variety of different music services, from Google Play Music to Spotify and Deezer, which will give you access to millions of songs.



1 You will have been asked to choose a music service during the setup of the Google home speaker, but if you skipped this step, or want to add more, you can add services at any time. Open the Google Home app on your Android device and tap the +Add button on the Home tab. Then tap Music and audio.



2 If you have a Google Play Music or YouTube Red account (connected to the current Google account), these services will be linked automatically to the Home app. To link one of the other music services (Spotify, etc.), tap the small link icon next to each one, read the information in the box that pops up, and then tap Link Account.

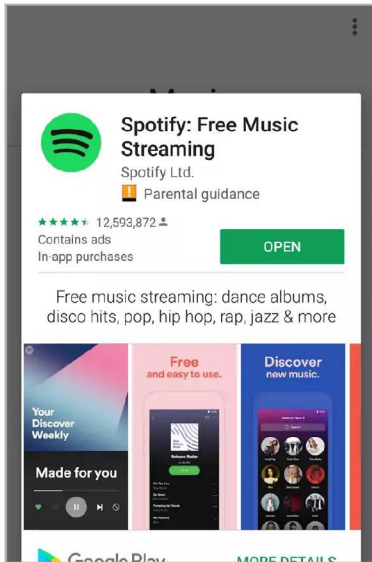


3 You will now be taken to the individual music service Login screen, where you will have to log in to your account (or create a new account if you don't already have one set up). Once this is done successfully, you will be returned to the Home app where you should now see the music service linked to your Home device.

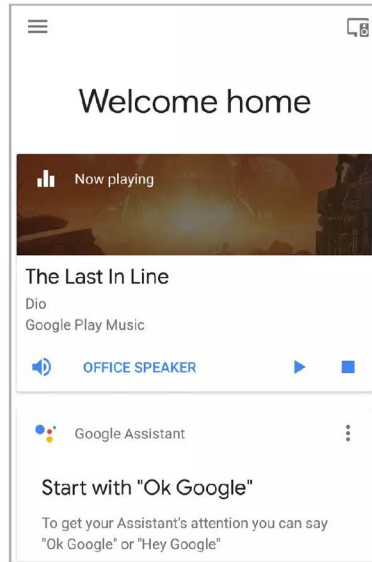


Playing Music on Google Home

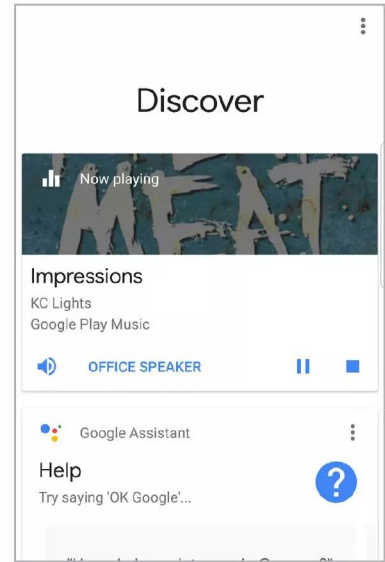
Once you have chosen all of the music services you want to use, you can start playing music through your Google Home speaker quickly and easily.



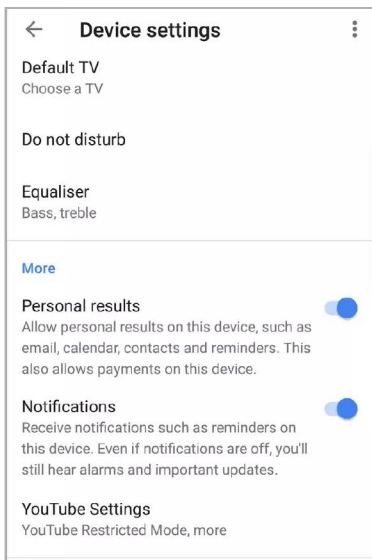
1 Now you have your music services linked to Google Home, you can start listening. Exactly what music you can listen to depends on which service you are using. For example, you may not be able to request certain songs by name if you only have a Spotify Free account.



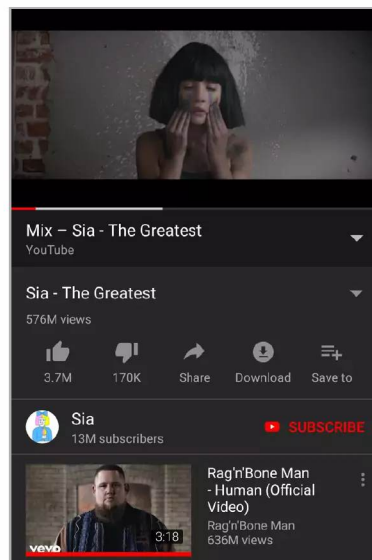
2 To play a specific song, say "Hey Google, play <song name>," "Hey Google, play <song name> by <artist name>," or "...play <song name> on <music service>." Certain music services will also allow you to search for similar songs by saying, "...play songs like <song name>."



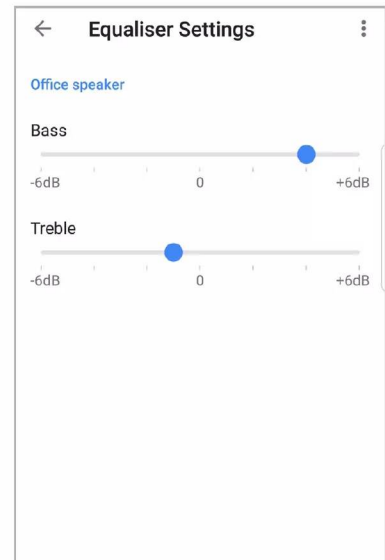
3 There are some specific commands for the different music services, but all of them will react to the general music control commands. These are: "Play," "Shuffle," "Pause," "Resume," "Stop," "Next," "Skip," "What song is playing?" "Volume up/down," or "Set volume to 5."



4 Guests and housemates cannot access your library content if you've set up Voice Match. However, you can give them access by uploading your music to their account. If you haven't set up Voice Match, guests and housemates can access music from your library in the same way you can.



5 You can also play music from your desktop Chrome browser on your Google Home speaker (as long as the computer is connected to the same Wi-Fi network). Open the browser and start playing the music. Click the Chrome menu button, select Cast and choose the speaker to play through.



6 You can use the Home app on your Android device to control the music that is playing on your speaker. Open the app and tap the speaker name on the home tab. Here you will see play and pause controls, along with a volume slider. Tap the Equaliser button to change bass and treble levels.

Playing Music Using Bluetooth

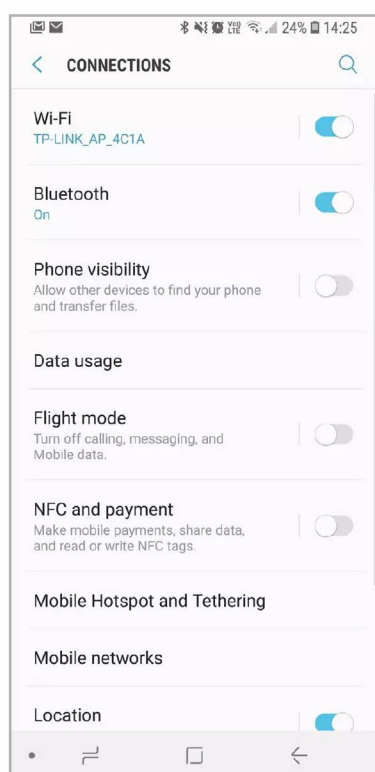
As well as being connected by Wi-Fi, your Google Home device can also be used as a Bluetooth speaker, playing music that is stored on your phone or tablet or even your laptop. You can also stream music from your Google Home device to a pair of Bluetooth headphones.

Play Music on the Home Speaker

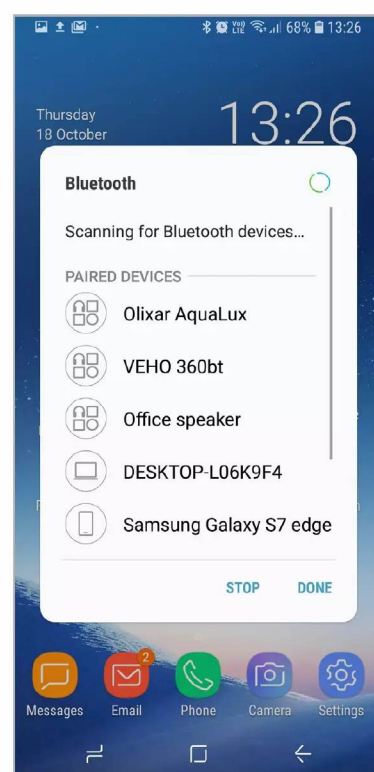
Being able to play music stored on your phone or tablet through the Google Home speaker is a useful addition to its bag of tricks.



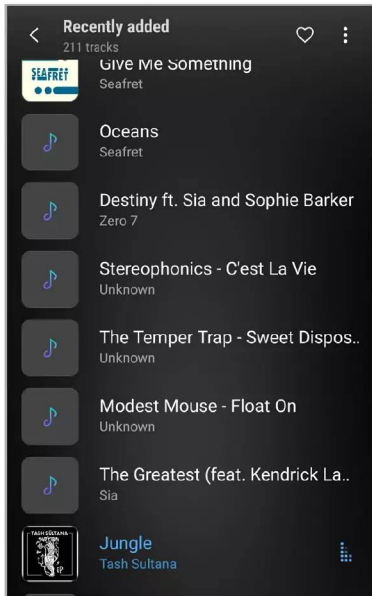
1 Open the Google Home app and tap the name of the device you want to connect with via Bluetooth. In the top right corner of the device info card, tap the device settings menu and then find the Paired Bluetooth devices heading and tap it. In the next screen, tap the Enable Pairing Mode button.



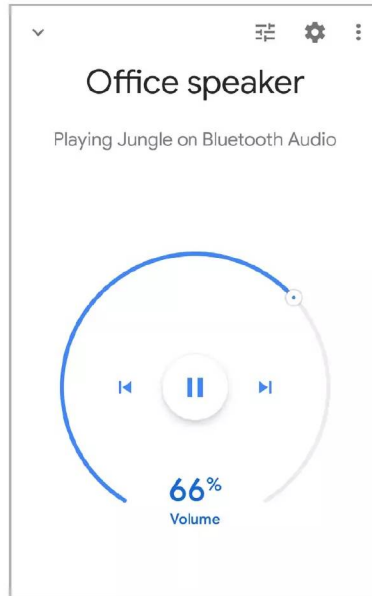
2 Now open the Bluetooth settings on your mobile device and turn Bluetooth on. The device will scan for available connections and you should see the name you gave your speaker appear in the list. If not, tap the Scan button to make your device look again. Tap the speaker name to pair the devices using Bluetooth.



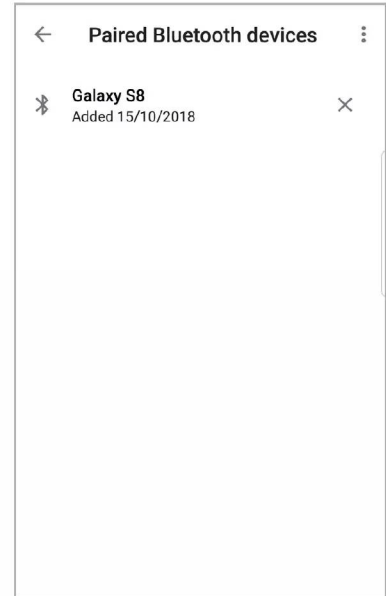
3 If the Google Home app is paired with multiple speakers, it will default to the most recently paired device. You can tell Google Home to connect by saying “Hey Google, connect to Bluetooth,” or you can change which speaker is paired by opening the Bluetooth settings on your device and selecting the one you want.



4 To play music through the connected speaker, just use whichever music player you normally use to play your device music. When connected to the speaker using Bluetooth, anything you play (from MP3 files to YouTube videos) will play through the speaker.



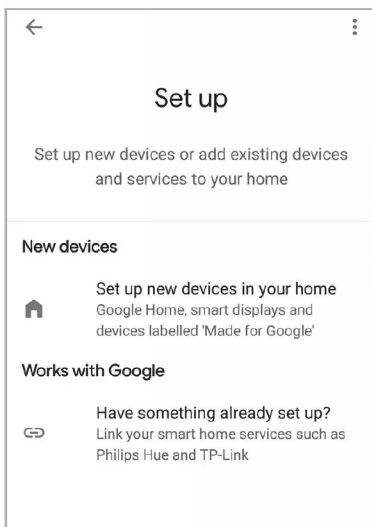
5 You can also use voice commands to tell your Google Home speaker to play music that is stored on your mobile device. Just say "Hey Google <song name> or <playlist name>." You can use all of the normal music voice commands to pause, stop, skip, change volume, etc.



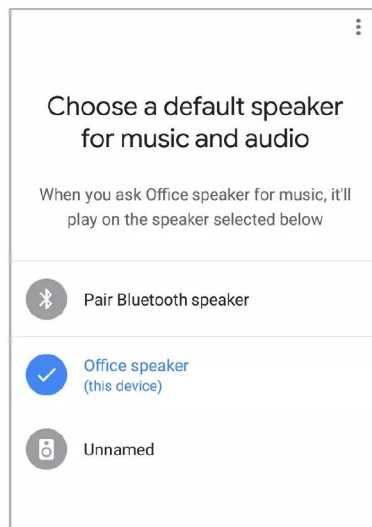
6 To unpair the devices, open the Google Home app and find the device card for the Google Home that you want to unpair. Open the device settings and then go to Paired Bluetooth devices. Tap the X next to the device that you want to unpair and then tap Unpair.

Play Music on Bluetooth headphones

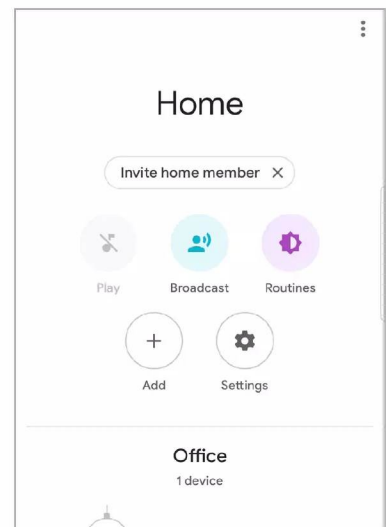
You can also connect a set of Bluetooth headphones (or another Bluetooth speaker) through the Google Home speaker and app.



1 Turn on your Bluetooth headphones and make sure that they're in pairing mode; this is normally done by pressing the Pairing button on your headphones (a light will usually flash to tell you). Now open the Google Home app on your Android device and select the speaker you want to connect to.



2 Tap the Settings button and scroll down to find the Bluetooth options. Tap "Default music speaker" and then tap "Pair Bluetooth speaker". It will then scan for available headphones (or speakers) and allow you to connect by tapping the name in the list of available devices.



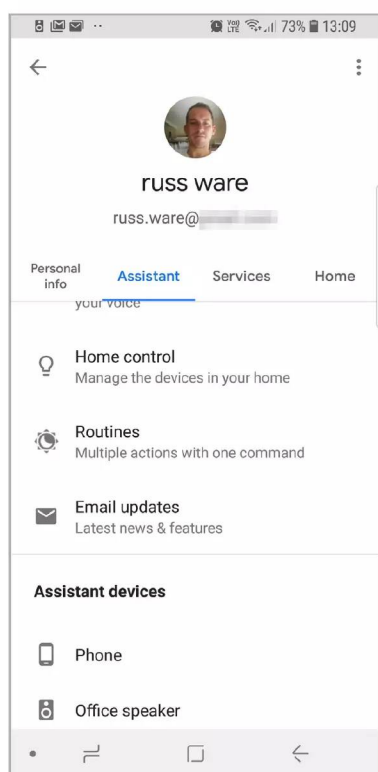
3 You can only have one connected speaker or headphones to play music through at a time. Once you pair and connect your speaker to a Google Home, it will auto-connect unless the speaker is disconnected or turned off. You can now use normal Google Assistant commands to play music.

Google Home Routines

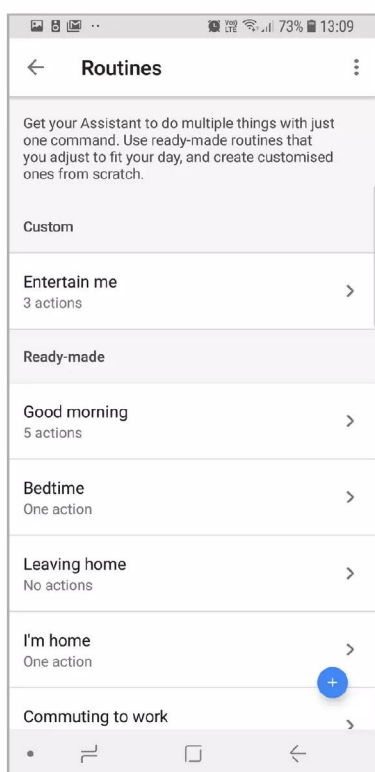
Routines are a set of actions that your Google Home can perform when activated by a single voice command. You can customise existing pre-set routines in the Google Home app, or you can create your own personalised routines from scratch, using a wide variety of available actions.

Create and Manage Routines

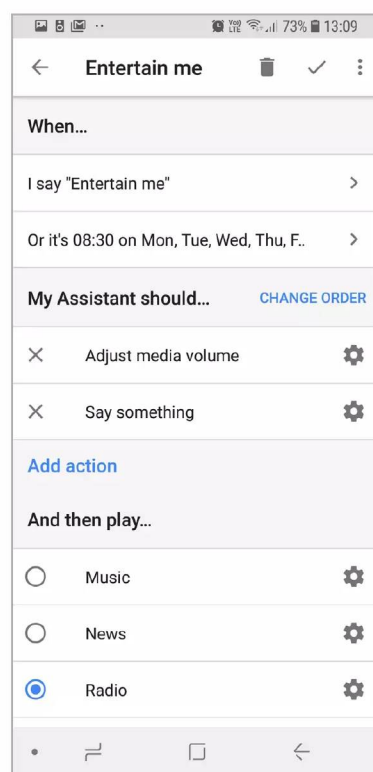
Learn how to customise, create and use Routines with your Google Home speaker and the Google Home app on your mobile device.



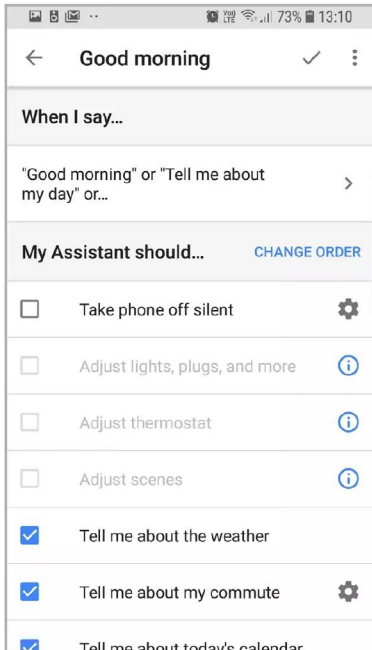
1 Your Google Home app comes with several pre-set routines. To view or edit these, tap the Menu button at the top left, and select "More settings". Scroll down and tap the "Routines" section. Here you will see displayed all of the existing routines, for example "Good morning" or "Bedtime".



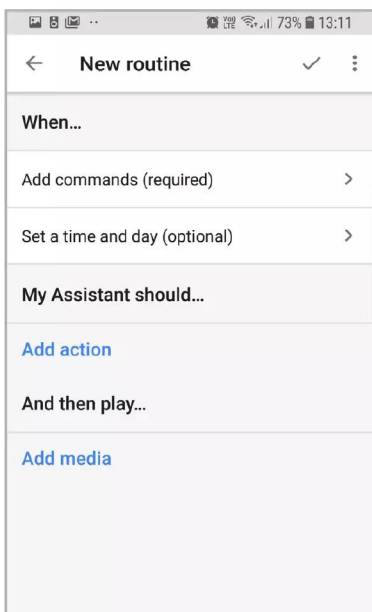
2 Below each routine name, you will see the number of associated actions. Tap a routine to start editing it. While all routines can be edited, you will notice they have differing numbers of actions that can be added. The pre-set routines illustrate this difference.



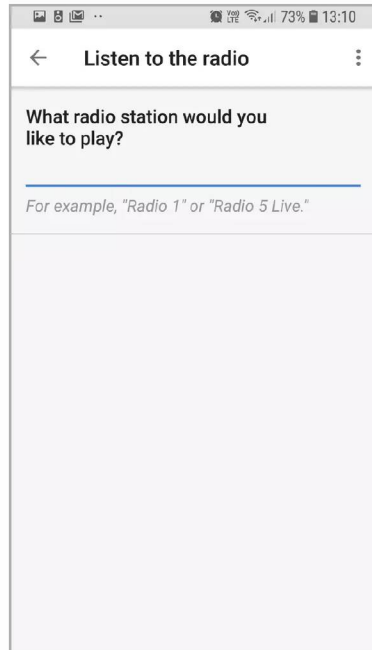
3 Each Routine is split into sections. These are: "When I say..." (the command) "My assistant should..." (the main actions to perform) followed by "And then play..." (additional actions). You can manage and edit each of these sections individually to create the routine you want.



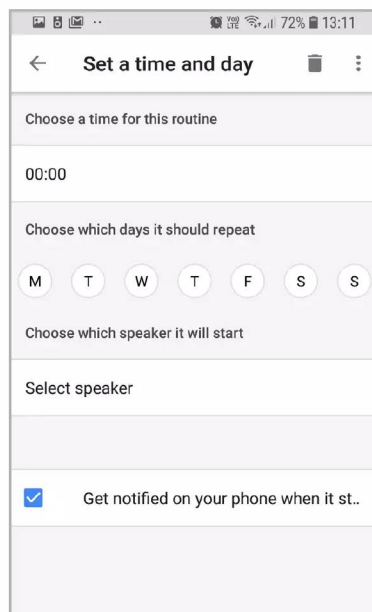
4 For example, the single command “Good morning” could take the phone off silent; tell you the weather, reminders and your commute information. It could then give you the news headlines from a variety of sources (BBC, CNN, etc.) before playing your favourite radio station.



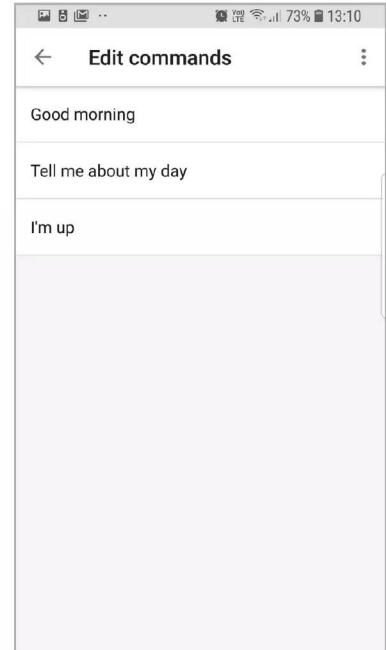
7 If none of the pre-set routines meet your needs, you can create your own from scratch. Open the routines settings in the Google Home app and tap the + button. Start by editing the command you want to use to activate it (e.g. “Good Morning”). Simple commands are the most effective, so keep it short for best results.



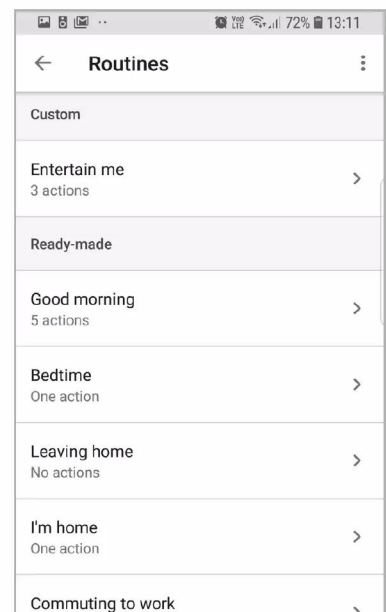
5 Tap the checkbox next to each action to add or remove it from the routine. If the action has a gear icon next to it, you can tap this to see further settings. For example, the Play Radio action allows you to choose the radio station you want to use, and music settings lets you choose the music source.



8 If you wish, you can set a day/time of day when the routine activates automatically although you can still activate the routine at other times with the command. Next, add an action, either by typing the name of a Google Assistant command, or by tapping “Choose popular actions”, selecting one and tapping “Add”.



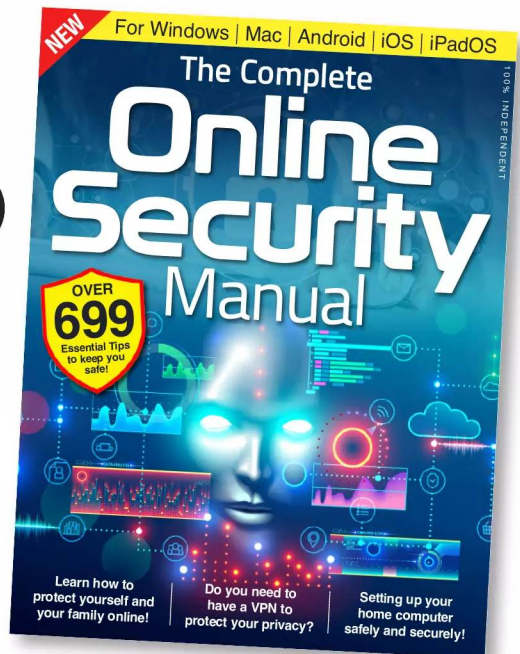
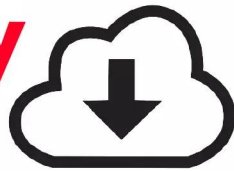
6 You can also change the command that activates the actions (although you will still need to say “Hey/Okay Google” first). Most pre-set routines have a couple of commands already set, but you can add a new one by tapping the top section, then tap + and type your desired command.



9 When you’ve finished setting up the new routine, tap the check mark at the top and the screen will change to display all routines. Your newly created routine will be given the name of the command word you used (e.g. “Entertain me”). Test the routine by speaking the command to your Google Home speaker.

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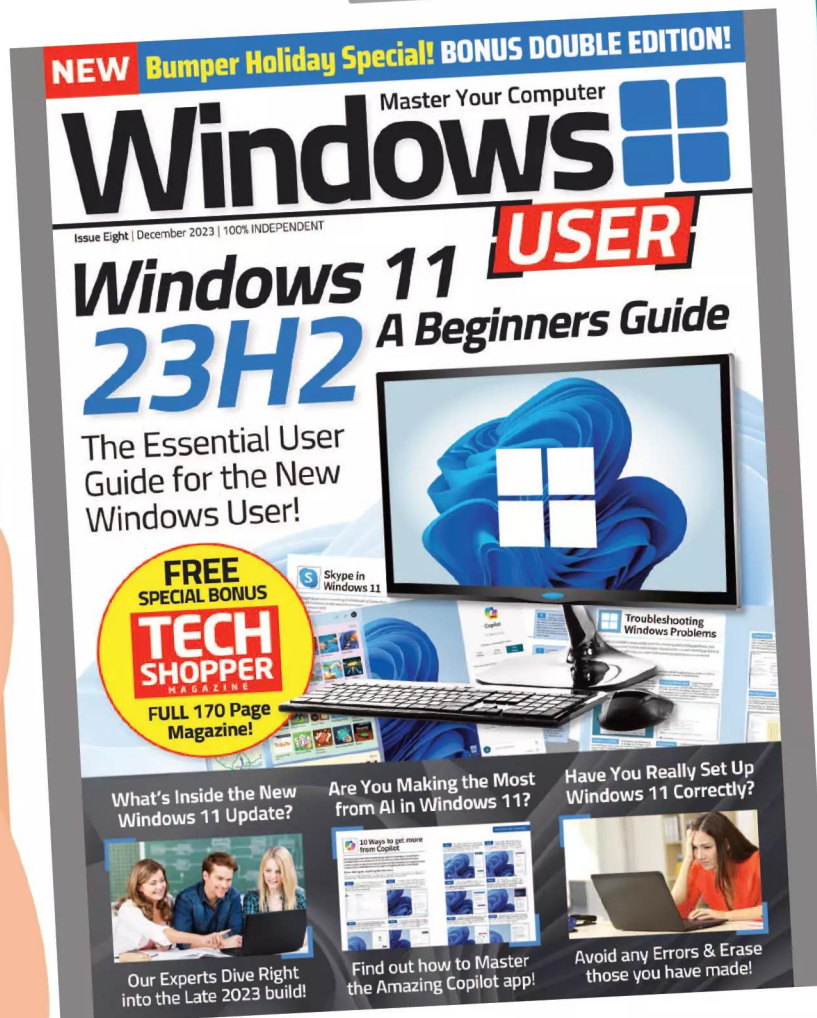
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